

Aspen Aerogels, Inc. NYSE:ASPN

FQ2 2021 Earnings Call Transcripts

Thursday, July 29, 2021 9:00 PM GMT

S&P Global Market Intelligence Estimates

	-FQ2 2021-			-FQ3 2021-	-FY 2021-	-FY 2022-
	CONSENSUS	ACTUAL	SURPRISE	CONSENSUS	CONSENSUS	CONSENSUS
EPS Normalized	(0.27)	(0.23)	NM	(0.26)	(1.02)	(0.68)
Revenue (mm)	25.68	31.67	▲ 23.33	26.90	109.51	138.74

Currency: USD

Consensus as of Jul-26-2021 12:02 PM GMT



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Call Participants

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Presentation

Operator

Good afternoon. Thank you for attending the Aspen Aerogels Inc. Q2 2021 Earnings Call. All lines will be muted during the presentation portion of the call with an opportunity for questions and answers at the end.

I would now like to pass the conference over to your host, John Fairbanks with Aspen Aerogels. Thank you. You may proceed, Mr. Fairbanks.

John F. Fairbanks

VP, CFO, Principal Accounting Officer & Treasurer

Thanks, Bethany. Good afternoon. Thank you for joining us for the Aspen Aerogels conference Call. I'm John Fairbanks, Aspen's Chief Financial Officer. There are a few housekeeping items that I would like to address before turning the call over to Don Young, Aspen's President and CEO.

The press release announcing Aspen's financial results and business developments as well as a reconciliation of management's use of non-GAAP financial measures compared to the most applicable GAAP measures is available on the Investors section of the Aspen's website, www.aerogel.com. Included in the press release is a summary statement of operations, a summary balance sheet and a summary of key financial and operating statistics for the second quarter and 6 months ended June 30, 2021. In addition, the Investors section of Aspen's website will contain an archived version of this webcast for approximately 1 year.

Please note that our discussion today will include forward-looking statements, including any statement regarding outlook, expectations, beliefs, projections, estimates, targets, prospects, business plans and any other statement that is not a historical fact. These forward-looking statements are subject to risks and uncertainties. Aspen Aerogels' actual results may differ materially from those expressed in these forward-looking statements. A list of factors that could affect the company's actual results can be found in Aspen's press release issued today and are discussed in more detail on the reports Aspen files with the SEC, particularly in the company's most recent annual report on Form 10-K. The company's press release issued today and filings with the SEC can also be found in the Investors section of Aspen's website.

Forward-looking statements made today represent the company's views as of today, July 29, 2021. Aspen Aerogels disclaims any obligation to update these forward-looking statements to reflect future events or circumstances. During this call, we will refer to non-GAAP financial measures, including adjusted EBITDA. These financial measures are not prepared in accordance with U.S. generally accepted accounting principles or GAAP. These non-GAAP financial measures are not intended to be considered in isolation or as a substitute for results prepared in accordance with GAAP. The definitions and reconciliations of these non-GAAP financial measures to the most directly comparable GAAP financial measures and a discussion of why we present these non-GAAP financial measures are included in today's press release.

I'll now turn the call over to Don.

Donald R. Young

President, CEO & Director

Thanks, John. Good afternoon, everyone. Thank you for joining us for our Q2 2021 earnings call. Today, I will describe the key highlights of our progress towards achieving our near-term and longer-term business goals. John will then recap our Q2 performance and finish with our updated outlook for 2021. We will conclude today's call with a Q&A session.

The key points I intend to cover are that we closed a valuable financing with Koch Strategic Platforms. We delivered strong Q2 financial performance. We raised guidance for the second time this year. We won additional PyroThin thermal barrier contracts, and we enhanced our Aspen Battery Materials strategy.

On June 30, we completed a \$75 million private placement with Koch Strategic Platforms or KSP. KSP is part of Koch Industries, one of the largest privately owned industrial companies in the world. We were an ideal investment target for KSP given its focus on high-growth companies, especially those innovating in new economy industries. KSP is targeting investments in fossil fuel value chain transformation, new sources of energy, energy infrastructure and the electrification of transportation. Markets where Aspen strengths are resource efficiency, asset resiliency and safety, translate to significant growth opportunities over this decade.

Securing KSP as an investor is also consistent with our strategy, which is to leverage our aerogel technology platform and -- securing KSP as an investor is also consistent with our strategy, which is to leverage our aerogel technology platform into high value, high-growth markets that support our position as a technology leader in sustainability. We believe we have the opportunity to double revenue every 2 years through this decade. Growth at this rate will bring scaling challenges, and for this reason, KSP is an ideal investor for Aspen.

KSP's investment not only strengthens our balance sheet, but brings with it broader corporate, technical and logistical resources that are available to Aspen as we scale our operations to keep pace with the rapidly growing demand for our aerogel products. We believe that these resources will be valuable, particularly as we move in high gear in the design, engineering and construction of Plant 2. We are in the midst of discussing Plant 2 with the Koch team to ensure a well-designed project that is delivered on time and on budget. Overall, KSP's investment will help unleash Aspen's full potential to create significant value during the emerging era of energy transformation.

Regarding Q2 performance and 2021 guidance, we delivered a strong quarter with revenue of \$31.7 million compared to \$24.6 million in the second quarter last year, a 29% increase. Gross profit grew 61%, showing the leverage associated with increasing utilization of our manufacturing plant. Over the course of the pandemic, we indicated our belief that the low-density work sites of our energy infrastructure end users would create pent-up demand, both for maintenance and project work. We were confident that as the impact of the pandemic began to subside, we would see revenue levels begin to increase towards pre-pandemic levels.

Significant revenue growth in Q2, particularly in regions with higher vaccination rates, is a good sign that this premise appears to be correct. And this positive indicator is the principal reason we raised guidance for the second time this year. One of the key components of our commitment to double revenue from 2021 to 2023 is to recapture our pre-pandemic revenue levels in our energy infrastructure business, which averaged \$35 million per quarter during 2019. We believe that we are well positioned to achieve this goal by 2023.

And one last point about the second quarter. The KSP investment increased our cash balance at quarter end to over \$100 million, which puts us in a strong position to continue to execute our strategy.

Turning to our PyroThin thermal barrier opportunity. We continue to make strong progress in developing our business opportunities during the quarter. Aspen's technology offers a unique combination of performance attributes that enable EV manufacturers to achieve critical safety goals without sacrificing drive range. Activity levels are high in the 3 stage business development funnel that I described in detail at the time of our last earnings call.

During the second quarter, we won additional scope for PyroThin thermal barriers in the battery platform of our original major U.S. automotive customer. We began Q2 with approximately \$1 billion of potential revenue through 2030 from our prior contract wins. During the quarter, we were awarded 2 contracts with potential revenue through 2030 of an additional \$300 million. Note that these 2 new contracts run through 2034, which adds additional revenue potential in the years beyond 2030 and support our view that thermal runaway mitigation will be a long-term requirement in the EV market.

In addition, we are on the cusp of an important design win with a leading Asian automotive OEM. This expected design win is for a specific EV model planned to be sold in multiple regions beginning in Q1 of 2022. This expected contract award positions us for a larger design win as the automotive OEM completes the design of its own battery platform that is expected to power all of its EV models through the decade.

We are eager to announce the names of both our large North American OEM and the leading Asian OEM as soon as possible. For now, we remain focused on securing additional design wins for PyroThin thermal barriers as we strive to become the EV industry standard for the management of thermal runaway.

Moving to Aspen Battery Materials, which we refer to as ABM, we are developing our carbon aerogel technology in the design of low-cost, high-performance silicon-rich anodes in lithium-ion batteries. The replacement of graphite with silicon and anode is widely viewed as the best near-term approach to boost lithium battery performance and to reduce cost. The approach enables drop in materials compatible with a manufacturing technology underlying today's battery gigafactories. Our work is centered on leveraging our 2 decades of experience in the design and manufacture of aerogel nanomaterials at scale in order to optimize the cost and performance of our carbon aerogels.

As ABM has increased its level of partner engagement and made additional investments in outstanding scientists, engineers and facilities, we have decided to add 2 additional angles to our commercialization strategy. First, we are exploring the idea of providing our patent-protected carbon aerogels to other companies that have their own silicon anode programs. Our carbon aerogels are mechanically strong and highly conductive. We have the ability to manipulate pore size and to make them uniform. These attributes make for an ideal protective host or a scaffold for silicon and helps address the challenge posed by silicon expansion during charge discharge cycles. This approach plays to the strength of our technology and may enable the broadest adoption of our carbon aerogel solution in the EV battery market.

And second, we are sampling with evaluation partners, our silicon carbon materials for use as the anode in solid-state batteries. We believe this 3-pronged approach to the commercial development of our carbon aerogels will enable us to partner with additional battery and EV OEMs and with battery material companies to leverage our technology more broadly and to reach commercial validation for ABM more rapidly. We are excited about ABM's potential and expect to formalize additional partnerships as we approach year-end.

At the beginning of the year, we said that our target would be to double revenue from 2021 to 2023 and reach the \$225 million level with 30% gross margins. We believe that we have both the business activity levels and the existing manufacturing capacity to achieve this goal. We also said that our target would be to double revenue again from 2023 to 2025. The key elements to achieving this objective are an active PyroThin business development funnel, restoring revenue in the energy infrastructure to pre-pandemic levels and solid execution of the Plant 2 capital project. Our confidence in achieving these targets is based on our potential for several additional multiyear battery platform wins for our unique and protected PyroThin thermal barrier technology.

For the Plant 2 capital project, our plan is to bring the additional capacity online by the end of 2023. As we said at the time of our last earnings call, a well-capitalized balance sheet and the ability to scale operations are important factors to the large EV OEMs who want us not only to have ample capacity, but also the diversity of manufacturing sites. The financial and capital project resources provided by Koch Strategic Platforms heightens our confidence that we will execute a successful capital project.

In closing, the key takeaways are that we closed a valuable financing with KSP. We delivered strong Q2 financial performance. We raised guidance for the second time this year. We increased potential revenue from additional contract awards for PyroThin thermal barriers, and we enhanced our strategy for Aspen Battery Materials. We are in a strong position to double revenue twice through 2025, and we believe we have the commercial opportunity to continue that pace of growth through the decade.

John, over to you.

John F. Fairbanks

VP, CFO, Principal Accounting Officer & Treasurer

Thanks, Don. I'll start by running through our reported financial results for the second quarter of 2021 at a summary level. Total revenue grew 29% to \$31.7 million from \$24.5 million in the second quarter of 2020. Net loss increased to \$6.7 million or \$0.23 per share this year versus a net loss of \$5.7 million or \$0.21 per share in the second quarter last year. And adjusted EBITDA was negative \$3.4 million compared

to negative \$2.1 million in the second quarter of 2020. We define adjusted EBITDA as net income or loss before interest, taxes, depreciation, amortization, stock-based compensation expense and other items that we do not believe are indicative of our core operating performance.

I'll now provide additional detail on the components of our results. First, I'll discuss revenue. Total revenue increased by \$7 million or 29% to \$31.7 million. This increase in second quarter revenue was principally driven by the beginning phase of a post-COVID recovery and demand in the refinery and petrochemical market, particularly in the United States, solid growth in the European building market and continued shipments to the Arctic LNG project, offset in part by a decrease in project work, both in the subsea market and due to the conclusion of the PTT LNG project.

Total shipments for the quarter increased by 35% to 90.9 million square feet of aerogel blankets, while our average selling price decreased by 5% to \$3.19 per square foot. The decrease in average selling price reflected an increase in the mix of lower-priced building materials products and 5-millimeter LNG infrastructure products this year versus the second quarter of 2020.

Next, I'll discuss gross profit. Gross profit was \$4.6 million or 14% during the second quarter this year versus \$2.9 million or 12% during the second quarter of 2020. This increase in gross profit was driven by the 35% increase in volume and a decrease in material cost, offset in part by an increase in manufacturing expense and the decrease in average selling price.

Next, I'll discuss operating expense. This year, we are purposely increasing operating expense levels in order to enhance the capabilities of our technical and commercial teams and associated resources in support of our thermal barrier and battery materials businesses. We've also increased spending this year to expand and defend our IP portfolio, supporting our energy infrastructure, thermal barrier and battery materials businesses. In contrast, during the second quarter of 2020, we significantly reduced compensation and spending levels in response to the uncertainty associated with the emerging COVID-19 pandemic. As a result, second quarter operating expense increased by \$2.7 million or 32% versus last year to \$11.2 million.

Next, I'll discuss our balance sheet and cash flow for the quarter. Cash generated from operations of \$1.3 million reflected a \$4.7 million decrease in working capital investment during the quarter, offset in part by our adjusted EBITDA of negative \$3.4 million. The decrease in working capital investment was broad-based and included decreases in accounts receivable and inventory balances and increases in accounts payable and accrued expense balances.

Capital expenditures during the quarter were \$2.4 million, and we're focused principally on improving the efficiency and the liability of our East Providence manufacturing facility and to a lesser extent, establishing our thermal barrier fabrication operations. Cash provided by financing activities of \$86.1 million was comprised of a net \$73.6 million from our private placement with Koch Strategic Platforms, \$12.3 million generated by our sale of equity through our ATM facility and \$200,000 from employee option exercises. As a result, we ended the quarter with \$102.3 million of cash, net current assets of \$105 million, no borrowings under our revolving credit facility and shareholders' equity of \$147.1 million. We also had access to an additional \$7.9 million available under our revolving credit facility at quarter end.

I also want to highlight that moving forward, we do not intend to sell any additional stock under our existing ATM facility.

I'll now turn to our full year 2021 outlook. Although COVID-19 continues to negatively impact our energy infrastructure markets, particularly in Asia, we're seeing continued signs of improving maintenance-related activity in North and South America and in Europe. We're also experiencing solid growth in the European building market. As a result, we are now projecting revenue growth for the full year of between 10% and 18%. And we're increasing our 2021 revenue outlook by \$7 million to between \$110 million and \$118 million for the year.

As we noted at the time of our Q1 earnings call, our 2021 outlook includes \$10 million of incremental expense to enhance the technical, commercial and operational teams and resources in support of our thermal barrier and battery materials of opportunities. Our 2021 outlook also includes up to \$18 million of

incremental capital expenditures to construct our advanced thermal barrier center to expand our battery materials production, fabrication and testing facilities and to complete the initial engineering designs for our second silica aerogel manufacturing plant.

We believe these strategic investments will position Aspen to take advantage of the significant growth opportunities available to us today in the electric vehicle market to leverage our aerogel technology platform to develop new high-growth businesses and to resume the strong operating performance that characterized 2019 when the impact of COVID-19 subsides. We remain firmly committed to making these investments over the course of 2021.

Our revised 2021 full year outlook is as follows: We expect total revenue between \$110 million and \$118 million, net loss of between \$28.9 million and \$31.7 million. Adjusted EBITDA between negative \$14.7 million and negative \$17.5 million. EPS of between a loss of \$0.94 and a loss of \$1.04 per share. This EPS outlook assumes a weighted average of 30.6 million shares outstanding for the year. In addition, this 2021 outlook assumes depreciation of \$9 million, stock-based compensation expense of \$5 million and interest expense of \$200,000. This full year outlook also projects a gross margin in the mid-teens and an average selling price of approximately \$3.35 per square foot for the year.

Turning to cash. We currently project our capital expenditures will range between \$18 million and \$23 million for the full year. As our planning efforts progress during the year, we plan to provide multiyear capital expenditure projections for our second silica aerogel manufacturing facility and other capital assets required to support our electric vehicle business opportunities. But overall, we're confident in our \$102.3 million cash balance and available credit under our SVB facility, will be sufficient to fund our near-term operating requirements and our strategic capital expenditure plan.

I'll now turn the call back over to Bethany for Q&A.

Question and Answer

Operator

[Operator Instructions] The first question is from the line of Eric Stine with Craig-Hallum.

Eric Andrew Stine

Craig-Hallum Capital Group LLC, Research Division

So maybe we can start on the thermal barrier side and the contract increase with the OEM in hand. Any color there? I mean, I would assume that's more vehicles or potentially its more content per vehicle or maybe how that breaks down as you look at these 2 new contracts?

Donald R. Young

President, CEO & Director

Yes, Eric. This is more content per vehicle. These are additional parts per vehicle. So same number of vehicles forecast, if you will, but just more content per vehicle.

Eric Andrew Stine

Craig-Hallum Capital Group LLC, Research Division

And the OEMS, I mean, I guess, thought process on that, is it realizing that this is more from than they thought? Or is it simply just part of optimizing their battery platforms?

Donald R. Young

President, CEO & Director

Yes. No, I think it's more the latter, actually. I think it's a function of becoming more familiar with our materials, to be honest, and finding additional thermal management uses for our PyroThin products within their battery platform. So I wouldn't necessarily say this is -- these are sort of emergency parts, if you will, I would say that this is sort of the fine-tuning of the design.

Eric Andrew Stine

Craig-Hallum Capital Group LLC, Research Division

And is that something that as you think about, as you mentioned, you've got a lot of activity in the 3 levels that you laid out. As you think about that content for vehicle, do you think this is the direction that other OEMs go as you start to knock out some awards?

Donald R. Young

President, CEO & Director

Yes. I think it's a good question. Just to review what we've said in the past and including it in our presentation on our -- in our investor website there. We've presented the idea of around \$275 of content per vehicle in our model. And we've also said often in the past that we believe our content will be between \$100 and \$300 per vehicle, really depending on the size of the vehicle, sedan versus SUVs versus trucks. And maybe also how OEMs finalize their designs and what have you. And so I think those numbers are valid. If anything, I would not choose up a little bit. But until we get more in hand, I think John and I are very comfortable with those kind of numbers from a modeling point of view.

Eric Andrew Stine

Craig-Hallum Capital Group LLC, Research Division

Maybe just on the advanced battery materials side, a little bit of a new strategy. Maybe the thought process there rather than going solo, obviously, I guess, expanding your market opportunity. But have you had inbounds on that? And just maybe what drove you in that direction?

Donald R. Young

President, CEO & Director

Yes. I think it's a couple of things. One is we've been very active, as you know, Eric, in the development phase of the material, working with our 2 announced partners, SK in Korea and Evonik in Germany. But as we've said before, we have a small handful of other companies with whom we're engaged. And I think it's that -- I think it's just moving down the learning curve has opened new ideas to us, some generated internally and probably some suggested to us externally. And it's -- and so it's driven that expanded or enhanced strategy to include our own silicon-rich anode, providing our carbon aerogel to others. And then exploring the role that our carbon aerogel silicon anode could play in a solid-state battery as well.

Eric Andrew Stine

Craig-Hallum Capital Group LLC, Research Division

And maybe just sneaking in one last one. Just on building materials. I mean on OEM I heard you talk about that in. It's been a long, long time, so that kind of caught my attention. I mean do you think that that is something where it's a bit of a catch-up with BASF or kind of the fruits of the refocusing that they did, I think, earlier this year?

Donald R. Young

President, CEO & Director

I would -- as we've said before, we've been disappointed at the rate of growth or the market penetration that we've had so far in that area. I think it is fair to say that we were pleasantly surprised by the nice uptick in revenue in building materials. We firmly believe that our high performance, noncombustible, highly efficient materials have a role to play in the building materials market. And we're just starting to get a little traction in there, but we're very pleased by the progress we've made in the second quarter and really the first half overall.

Operator

The next question comes from the line of Chris Souther with B. Riley.

Christopher Curran Souther

B. Riley Securities, Inc., Research Division

Maybe just a little more details on the extension here with that first customer. How does this change the gains you had previously talked about? Should we think about this, essentially the 30% increase in each of the years on the platform? So looking out to 2023, where you talked about, I think, \$75 million or so. Is that closer to \$100 million? Or is it kind of more backend, some of the later models having kind of the more content? Maybe just kind of walk through the timing of the cadence increase here.

Donald R. Young

President, CEO & Director

For now, Chris, what we want to -- the expectations that we want to set are consistent with what we've said before. And as you know, low single-digit millions this year, higher single-digit millions next year as new models are rolling off, we were targeting that \$75 million mark in 2023. And then that doubling in 2024 and in the outer years of the decade. It is fair to say that this -- I don't want to say it within the backend necessarily because this is really a content per vehicle issue for us. So it's an uptick across that board, it's not necessarily all backend loaded. It's a content per vehicle calculation for you. So look, we're extra comfortable with those numbers that we outlined previously. And this really fortifies that and gives us a bit more content per vehicle, no question.

Christopher Curran Souther

B. Riley Securities, Inc., Research Division

So maybe just on to the Asian automotive OEM that you talked about being on the cusp of a win here with, which is great to hear. Maybe just a little bit more on the scope of the program there. Is this a global OEM that you're working on for a battery platform, one of those kind of top 10 traditional OEMs that you've talked about, where you've got 5 in that late stages at this point with them? Or is this you've got EV kind of only player? And then what are kind of the model years where that platform is expected to launch, if you could provide that, I think, would be helpful for people as well?

Donald R. Young

President, CEO & Director

Yes, Greg. It is one of the top 10 major automotive OEM with a significant EV program going forward. And Asia based as we mentioned. What's interesting about this for us is that we are being designed in, in a pretty rapid way into a very specific model on the significant launch that they have planned in several regions around the world, beginning in Q1 of 2022. And there was a significant focus on having that model launched on time and there was a concerted effort to bring the pieces together, if you will, and we were very responsive to that. And that's the nature of the design win that we're anticipating here in the very near term.

What is interesting in our work with this company is that they have had a keen focus on, let's just call it for them sort of gen 2, which is the advancement of their own battery platform, and that battery platform is destined to power, SUVs, all their models over the course of this decade. And so winning this first piece is really, I think, puts us in the catbird seat to be designed into the platform here in this coming period of time. And so -- and just, again, kind of rough numbers on this, the focus on the content per vehicle is not dissimilar from the North American company that we've announced previously. So this is a great start for us with this particular customer, and we think it's just the start, and we've got a long future with that outstanding company.

Operator

The next question is from the line of Amit Dayal with H.C. Wainwright.

Amit Dayal

H.C. Wainwright & Co, LLC, Research Division

With respect to these models hitting the market early 2022, maybe first quarter 2022. Do you anticipate potentially shipping product against these in Q3 or Q4? I mean, some of this probably is already underway for you. I'm just trying to see in terms of revenue recognition by the end of the year, for the EV side, do you see something to start coming in for you guys?

Donald R. Young

President, CEO & Director

Actually, Amit, that's a good question. We -- the launch is actually at the end of Q1, but we would anticipate some initial shipments in Q4. And -- but we've got that baked into our 2021 aggregate outlook for this year. So it's not going to change the overall estimate for our EV thermal barrier business significantly in 2021, but there is some potential for revenue from that second customer this year.

Amit Dayal

H.C. Wainwright & Co, LLC, Research Division

And then on the building material side, was this sort of just a near-term sort of contribution for you from maybe some projects that came up versus it being more of a -- more concrete trend going forward that you will see potentially more contribution on the building materials side going forward?

Donald R. Young

President, CEO & Director

The observation that we have here is that building materials more broadly were very active markets in several regions of the world, interestingly around the pandemic, and we certainly felt here in the United States and in Europe. I think with our materials, in particular, this was not driven by any one given project or even 1 or 2 or 3 given projects. This was pretty broad-based activity levels where our materials, again, high performance, highly efficient, noncombustible, again, finding roles and a whole host of opportunities in this segment. So we believe this is the beginning of our ability to grow that business in the years to come. We really do believe that the market is moving towards the idea of highly energy-efficient and noncombustible. And we've got a very, very important offering, we think, in that space.

Amit Dayal

H.C. Wainwright & Co, LLC, Research Division

Just one last one for me. In terms of the KSP investment, should we think about KSP just being a little more passive versus more active? Like how should we think about their involvement post the investment in the company?

Donald R. Young

President, CEO & Director

Well, KSP, they're investors first, and they focus on making good investments, and they're very focused on certain segments that they want to get a kind of a bird's eye view on and they've made, obviously, the investment in us and some other fine companies. It is also part of their strategy, though, to bring more than money to the balance sheets of their portfolio company and to bring other resources. And so for us, sort of the most, if you will, most logical, most near term, given that we're, as I said in my notes, moving into high gear here around Plant 2, they are -- they do significant projects all around the world and for us to be able to supplement our very good capital projects team with resources from the Koch team is a big advantage for us. So again, first and foremost, investors, but part of their strategy is to help their portfolio of companies in any way they can.

Operator

The next question is from the line of Doug Becker with Northland Capital Markets.

Douglas Lee Becker

Northland Capital Markets, Research Division

You started to address this a little bit, but I was hoping to get a little more color on framing the potential size of the imminent deal with the Asian automotive OEM in the shorter-term and really the longer-term opportunity. And it sounded like you were saying the content per vehicle would be similar, but if you could frame it a little bit more on the longer-term side?

Donald R. Young

President, CEO & Director

Yes. So I think, Doug, and John was trying to explain this. But with the U.S. automotive OEM, we're in a battery platform, and that battery platform will be used across 25 or 30 models ultimately. With the Asian automotive OEM, we're initially in a single model, although that model is a global model. It will be sold in Asia, in Europe and in the U.S. But it is -- I think in terms of content per vehicle, it's about the same, but by its very nature, that initial contract, the expected contract will not be as significant as focusing with the U.S. automotive OEM. However, it puts us in line to ultimately secure a battery platform win, which could be as significant as what we've seen. But that's not what's on the table today. What's on a table today is a single model win. And so contextually, it would be 125th of what, just using 25 models, 125th of what we'd expect from the U.S. business at present, but could ultimately be, to the extent we're able to win the platform, could ultimately be as big as what we're seeing in the U.S.

Douglas Lee Becker

Northland Capital Markets, Research Division

And what are the remaining steps to being able to officially announce this deal? It really does seem like it's imminent to try and get something into the first quarter model.

Donald R. Young

President, CEO & Director

We have been finalizing the design and the contract, and I think you know us well enough, Doug, that we would not have talked about being on the cusp unless we were on the cusp. So we're working on the final elements of the contract and the agreement.

Douglas Lee Becker

Northland Capital Markets, Research Division

And then in light of some potential customers looking at the use of the carbon nanomaterials and solid-state batteries. I just want to get your latest thoughts on the opportunities and the threats from solid-state batteries because at least arguably, it really could eliminate the thermal runaway issue, but that might be a much longer-term threat.

Donald R. Young

President, CEO & Director

We -- so our work -- again, we're engaged on the solid-state -- with the solid-state focus with 2 entities. And yes, in the early days of testing and evaluating our materials in the context of a solid-state battery structure. To the -- and we'll keep you up-to-date as we make progress. I think an interesting milestone would be to be able to announce the kind of evaluation partnerships that we have with SK and Evonik, with these companies and some of these other focal areas for us. So with respect to the -- I suppose the threat of solid-state, we believe that lithium-ion batteries will be around for quite a long time. And that the solid-state will develop over a fairly long period of time. And that that solid-state technology to reach at scale is something that is out in 10 and 15 years. And we believe that as we go towards versions of solid-state, that the thermal runaway risks only escalate over the course of that period of time. We also believe that with the amount of work and scale that is going into lithium-ion batteries that they will continue to improve performance, but also cost and will be a very challenging competitor if and when solid-state reaches scale.

And so look, we're -- as I indicated in my comments, part of the contract of the North American entity reaches out beyond 2030. For us, actually that's an indication that people are planning for thermal runaway to be an issue out into that kind of time frame, 10 and 15-year kind of time frame. So of course, there are no guarantees for anything forever. We think 10, 15 years is a very, very long runway, especially for a technology platform company that is constantly innovating and entering into a variety of new markets. So again, we're very respectful of it. And in fact we're putting some chips on the table ourselves on the solid-state type because it's -- I think for us to do.

Douglas Lee Becker

Northland Capital Markets, Research Division

Any change to the ABM [TAM]? Or is that, well, too soon to be broadening that opportunity?

Donald R. Young

President, CEO & Director

I think we'd like to leave those numbers alone for now.

Douglas Lee Becker

Northland Capital Markets, Research Division

They're pretty sizable as is.

Operator

The next question is from the line of Shawn Severson with WCR.

Shawn M. Severson

Water Tower Research LLC

Don, I was wondering if -- just going back to energy infrastructure business for a moment. I assume most of the uptick has been maintenance stuff and turnarounds right now things that have been delayed. But how does the project work look going out over the next couple of years? I know that can be lumpy and the timing difficult. But obviously they can be bigger ramps and bigger projects to come out. And then eying into that, what about anything on the hydrogen front or any updates?

Donald R. Young

President, CEO & Director

Yes. So you are correct that the highest activity levels that we have seen here as we, I always want to say, coming out of the pandemic. These days are a little murky on that. But certainly, as we -- certain regions are working their way through it. Most everything has been maintenance. We love maintenance work. And so we've been restocking the supply chain and the distribution channels. There's been a tremendous amount of activity, especially in the U.S., as John said in his comments. We did, as we announced in the last quarterly call, we ended another LNG business in Arctic LNG, which is a terrific project for us here this year. With respect to additional projects, I really believe that we're in a very strong position in the specifications of a wide range of projects that were put on pause, leading into as the pandemic started. We have seen some of them begin to come to life again, in the planning stage, if you will. And we believe that as those projects initiate, we will win our fair share of work there. And we have every expectations that our revenue mix of 60% maintenance and 40% project will be the norm here again as we get to the backside of the pandemic.

Shawn M. Severson
Water Tower Research LLC

I was just wondering, maybe surprised, the pipeline a little bit differently and looking at for the PyroThin product. Are all of those OEMs and customers in there? Are they all chasing a model year for a launch? I mean, if we're looking at -- even though they're in different stages of development with you, is this all kind of coming into a 2024 year or 2023? And just trying to understand the timing, even though they may be in different stages of development, is there a year that this is really converging on?

Donald R. Young
President, CEO & Director

Well, what we have seen and what they've announced, if you look at these companies, they -- typically, they have announced 1 or 2 or 3 vehicles here out over the course of the next 2 or 3 quarters. And then it's really 2023, where you start to see some of the company saying that they'll have 5 and 10 vehicles out. And then as you get '24, '25, you see some of them saying 2025, even 30 vehicles, electric vehicles in those model years. So it's not inconsistent really with the ramp that we've talked about from the North American company that we've discussed, just low single-digit millions this year, mid to upper single digits next year, boom, that \$75 million target number in 2023. That's a function of the battery platform being utilized over a greater number of models and picking up market share. And then, of course, by the time you get out to 2025, you're more than double that number. So I think that ramp is very emblematic of sort of the timing of these companies rolling out their various models.

Operator

The next question is from the line of Tom Curran with Seaport Global.

Thomas Patrick Curran
Seaport Research Partners

So starting on the PyroThin side, just hovering a bit more detail out on this pending design win with the Asian automaker. What would be the remaining steps in time line in progressing from this single model award to some form of a multi-model battery platform based contract?

Donald R. Young
President, CEO & Director

Well, Tom, I think it really relates as much to their development, the finalization of development of their battery platform. So it's just a little brief history. I mean what we -- if you look at a variety of companies and the approaches people took. Some people had a dedicated battery platform concept really in the 2015, 2017 sort of time frame, and they've been driving down that road ever since. And I would say our North American entity design customer is a good example of that. Others came to this approach a little later. And they did that because I think they viewed their approach, they were going to rely -- and they were going to be more sort of integrators, if you will, and really rely more on their battery cell partners, the LG, the Samsung, the SKs, the Panasonic, the CATLs of the world to really drive their program. And I think as certain companies began to change their tune and Tesla is probably a good example of that, right,

where they really made a very specific change in bringing more and more of their technology in-house around energy storage. They think of themselves to a great extent as an energy storage company at this point. So -- and several companies have really focused on this battery platform idea.

So they're at different stages of development in their own personal or in their own corporate time lines. And we -- I think the Asia-based customer, I think, is a good example of this. They don't want slim down on the launch promises they gave. So their first approach was to be sure that they had the model ready to roll when [indiscernible]. But we know that they're focused on the battery platform themselves and we work closely with them on that.

Thomas Patrick Curran
Seaport Research Partners

And then when it comes to the remaining prospective customers you've had at stage 3 in the development pipeline, assuming this Asian automaker was one of them as of the last update you gave us, you've gone from 5 to 4. Does the current leading candidate for becoming your next customers seem most likely to start with a prototype order similar to the very first sale you made in China? A design win maybe for a single model or 2 or jump straight into a big battery platform based production volume contract such as your first North American customer?

Donald R. Young
President, CEO & Director

I think it will be a combination of the latter 2 really, the specific model. And while we're working very closely on a broader battery platform for the entity. But there are some who are quite advanced in their battery platform work. And so we could be right into that final stage with others as well, Tom. So I think -- I would like for your expectations to be that it will be a combination of those 2. With respect to the idea of prototypes, we are active selling prototype parts to at least 5, maybe more at this point. But at least 5 companies, we're selling parts to these companies. And the distinction is, as you know, is prototype parts are going into vehicles that they're not planning on selling and production parts are going to vehicles, whereby they're rolling them out and selling them to the public.

John F. Fairbanks
VP, CFO, Principal Accounting Officer & Treasurer

Yes. Tom, yes. So in the second quarter, we had revenue from all the companies in stage 3, but it was prototype revenue. So to get to stage 3, you're kind of in that prototype bucket already. And what we're then doing is converting them to commercial contracts that are either for a battery platform or for a model.

Thomas Patrick Curran
Seaport Research Partners

So ever since you realized that first dollar of prototype revenue back in 2Q of 2020, you've had just a steady stream prototype part sales and stage 3 is all about converting that now into some form of production award?

John F. Fairbanks
VP, CFO, Principal Accounting Officer & Treasurer

Yes. It really becomes production award, and it's really when that material is going to end up in vehicles that go to their dealers, right? So that's the difference. When it's in prototype stage, they're putting it in prototype vehicles and ensuring those vehicles, they're driving them around and make sure they meet their design specifications or if they're going into thermal barriers, going into lithium-ion batteries, they might put them in a lab and instigate the thermal runaway and make sure those barriers perform as advertised. And so -- but at that point, they are buying material from us.

Thomas Patrick Curran
Seaport Research Partners

That's a helpful clarification. And then on the ABM side, this will be my last one, try to help you guys finish on the hour. When it comes to the first prong of your strategy, is it your understanding that your partners are using those evaluation samples to explore anode structures or investigate uses in some other way that differs from your scaffolding host design?

Donald R. Young

President, CEO & Director

No. In the first leg of the 3 legs in this -- our traditional approach, if you will, we have been supplying our silicon-rich anode material to them and iterating with them as they have set metrics or milestones for us to achieve. And oftentimes together with specific recommendations back and forth as we iterate. So I hope that answered your question, Tom. So that was our traditional approach. That was our initial approach, and we're still very engaged at that level. By far of the 3 approaches, that's our biggest focus today. These other areas really emerged from conversations that we had, again, with that small handful of automotive and battery OEMs who wanted to explore some additional ideas with us. And that's how we came. Our expertise, of course, is around the carbon aerogel. It's the manipulation of that -- of those carbon materials. So we know that it's a particularly interesting material, host material. And we're pretty unique, we think, in the way that we can construct that material. And it gives us, as I said in my notes, an opportunity to have a broader adoption. We've talked about being OEM agnostic and with PyroThin. We've talked about being an industry standard with PyroThin. I'm not quite there yet with this other approach on ABM. But the concept is the same that it will allow a broader adoption if we provide this particular aspect, it really suits, it goes right to our technological strength. And so that's the nature of the discussions and collaborative work that we're doing with these other companies.

Operator

The next question is from the line of Jed Dorsheimer with Canaccord Genuity.

Jonathan Edward Dorsheimer

Canaccord Genuity Corp., Research Division

Most have been asked, but I guess first product out of the gate, is that going to be a value engineering implement or new platform launch? In other words, if there's a battery on the market that has some existing problem for fire mitigation. Would you be slotted into an existing model? Or is this for a new model?

Donald R. Young

President, CEO & Director

The PyroThin work that we're doing for the thermal barriers is going into a new model. And so it's a very good distinction, actually, Jed. We -- because we know that there are existing electric vehicles there that are running into thermal management, thermal runaway challenges, for sure, right? And so the vast majority of the work we are doing is on new models, typically focused on new battery platforms and not doing remediation work looking backwards, if that's the right term.

Jonathan Edward Dorsheimer

Canaccord Genuity Corp., Research Division

Then on just silicon anode efforts there. I thought -- maybe I misunderstood, but I thought I heard you talking earlier about solid-state, yet all the solid-state companies seem to be abandoning development or at least pushing out time frames and coming back to a traditional, moving into silicon-based anode, which would seem to increase your value proposition. I just want to make sure that you're not endeavoring into solid-state at this point that you're still squarely focused on developing your silicon anode solution?

Donald R. Young

President, CEO & Director

That's our principal focus. And you are right. We're seeing a lot of interim steps between where we are today, where the industry is today and what people sort of think of as -- sometimes people use the expression, true solid-state. And the work that we're doing, again, is predominantly focused on today's

chemistries and today's approaches, today's gigafactories, et cetera. We have done some work on what role our silicon carbon aerogels may play in a solid-state construction. We believe that this is very much on the our stage and down the road many, many years, but we're learning a lot. And we do believe that our materials have unique properties even with a solid electrolyte. So again, we believe that is in the distant out many, many years from now. So again, our principal focus, as I said earlier, is on that silicon rich anode material, bringing that carbon aerogel structure to current technology assets.

Jonathan Edward Dorsheimer

Canaccord Genuity Corp., Research Division

One last question for me, and I'll let everybody get on with their night. The LNG work that you're doing up north, is there a hydrogen component in terms of steam reformation? Or is that strictly LNG?

Donald R. Young

President, CEO & Director

It is. Our role is on the LNG side. And -- but Jed, we've continued to internally articulate the role that we may have in providing thermal management and fire safety for the both the storage and the transportation of liquid hydrogen. And again, it's such a natural offshoot of our value proposition in LNG. And the scale that they're talking about to have a sort of an interstate system of hydrogen is the numbers are just, as you very well know, are just gigantic kinds of numbers. So we're exploring our role. We're trying to partner up with some of the leaders in the space to get smart on it and make sure people are -- have a keen understanding of the value proposition that our materials can bring into that market.

Operator

There are no additional questions waiting at this time. I would like to pass the conference back over to Don Young for any closing remarks.

Donald R. Young

President, CEO & Director

Thank you, Bethany. Thanks very much. We appreciate everyone's interest in Aspen, and we look forward to reporting our third quarter 2021 results to you in late October. Be well. Have a good evening. Thank you.

John F. Fairbanks

VP, CFO, Principal Accounting Officer & Treasurer

Thanks, everybody.

Operator

That concludes the Aspen Aerogels Inc. Q2 2021 Earnings Call. I hope you all enjoy the rest of your day.

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