



Aspen Aerogels Inc.

Third Quarter 2016 Earnings Conference Call

November 3, 2016

C O R P O R A T E P A R T I C I P A N T S

Don Young, *President and Chief Executive Officer*

John Fairbanks, *Chief Financial Officer and Treasurer*

Greg Landis, *Vice President, Finance*

C O N F E R E N C E C A L L P A R T I C I P A N T S

Chip Moore, *Canaccord Genuity*

Sean Hannon, *Needham & Company*

Eric Stine, *Craig-Hallum*

Robin Schumacher, *Keybanc Capital Markets*

Sean Meakim, *JP Morgan*

Shawn Boyce, *Nextmar Capital*

Geoffrey Scott, *Scott Asset Management*

P R E S E N T A T I O N

Greg Landis:

Good afternoon. Thank you for joining us for the Aspen Aerogels conference call. I'm Greg Landis (phon), Aspen's Vice President, Finance. There are a couple of housekeeping items that I would like to address before turning the call over to Don Young, Aspen's CEO, and John Fairbanks, Aspen's CFO.

The press release announcing Aspen's third quarter 2016 results and business development as well as a reconciliation of Management's use of non-GAAP financial measures as compared to the most applicable GAAP measures is available on the Investors section of Aspen's website, www.aerogel.com. Included in the press release is a summary statement of operations, a summary balance sheet, a summary of key financial and operating statistics for the quarter and nine months ended September 30, 2016. In addition, the Investors section of Aspen's website will contain an archived version of this webcast for approximately one year.

Please also note that our discussion today will include forward-looking statements, including any statements regarding outlook, expectations, beliefs, projections, estimates, targets, prospects, business plans, and any other statement that is not a historical fact, and such statements are subject to risks and

uncertainties. Aspen Aerogels' actual results may differ materially from those expressed in the 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 in 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.

The forward-looking statements made today represent the Company's views as of today, November 3, 2016. 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 US 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 of 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 is also available in today's press release.

I'll now turn the call over to Don Young, President and CEO of Aspen Aerogels.

Don Young:

Thanks Greg.. Good afternoon. Thank you for joining us for our Q3 2016 earnings call. I will provide comments about the business and our performance, and John Fairbanks, our CFO, will present financial details for the third quarter 2016 and our guidance for the full year. We will conclude the call with a Q&A session.

I plan to cover three topics in my prepared remarks. First, I'll provide a third quarter and year-to-date 2016 overview, a sense for the current commercial environment and a market outlook for 2017. Second, I'll provide an update on our Plant 2 project and related financing, and third, I'll review progress on our strategy of leveraging our Aerogel technology platform.

Revenue for the quarter declined by 6% while revenue year-to-date increased by 6% compared to 2015. We improved our gross margins over these same periods of time from 16% to 22% in Q3 and from 17% to 22% for the nine-month timeframe. Although this 22% gross margin is below our mid-20s target, the shortfall is attributable specifically to customer mix and more generally to the continued weakness in energy market. As we have said in the past, we will experience quarterly variability in revenue and gross margin due to projects, product mix or macroeconomic trend in a given market segment. As we achieve our objective to diversify our end markets, we expect that quarterly variability will become increasingly muted.

The commercial environment in 2016 has been and continues to be challenging. As predicted, the upstream market, subsea and oil sands for us, has been very quiet. These two segments generated approximately \$28 million of revenue in 2015, representing over 20% of total revenue for the year. This record performance occurred as oil prices and overall energy investments were generally declining and demonstrates the fact that our products tend to be used at the tail end of projects. The full effect of lower oil prices and reduced energy spending became fully evident in our revenue trends in 2016. We project that our upstream revenue will approximate \$5 million in 2016, a decline of over \$20 million from 2015.

With our overall revenue expected to be roughly flat in 2016, we were able to fill the upstream shortfall with strong shipments to the South Asia Petrochemical Project and with the continued development of our adjacent and new markets, specifically LNG, district energy and building materials. While we expected

the weakness in the upstream market, we did not fully anticipate the extent of the recent softness in the downstream market, primarily refineries and petrochemical plants. While not nearly as dramatic as the declines in the upstream market, the downstream has been marked in 2016 by delayed projects and lean maintenance budgets. In the US market, for example, we believe industry-wide insulation sales in our core refinery and petrochemical segment have declined by 20% to 30% this year. This environment has made growth difficult but we have been able to substantially maintain our revenue levels in the US in 2016, both by realizing our price increases and by continuing to take market share.

For 2017, the expected completion of the South Asia Petrochemical Project presents a challenge similar to this year's decline in our upstream business, in this case amounting to a gap of approximately \$20 million for 2017. We will seek to compensate for this gap by relying again on price increases, market share gains in our core markets and continued development in our adjacent and new markets, including the second half launch of our new product dedicated to the large and attractive power market.

For our planning purposes, we are assuming that conditions in the overall energy market in 2017 will be about on par with 2016. This is to say no meaningful upstream activity and frugal downstream spending by our refining and petrochemical end users.

In this assumed macro environment, and considering our South Asia Petrochemical Project will finally end, we believe that we could be challenged to maintain our overall revenue levels in 2017, particularly during the first nine months of the year. While there is a recent industry opinions suggesting the potential for stronger oil prices and refinery margins in 2017, we believe planning for a slower, more conservative recovery is prudent. We are taking all actions necessary to be positioned to participate aggressively as the recovery builds momentum.

The second item I would like to cover in these remarks centers on our Plant 2 project and the related financing. In September, we received approval from our Board of Directors for both our Plant 2 project and for the related debt financing proposal which we received from a leading financial investor earlier that month. However, based on our staged gate decision making process we have decided to temporarily pause Plant 2 to better pace the project against our assessment of demand for the 2018 to 2020 timeframe. This timing adjustment better aligns the debt, the spending on Plant 2 construction and our assumed demand plan based on the current energy environment. We believe it is prudent at this time to maintain a strong, debt-free financial position while executing our strategy.

It is important to remember that we have annual revenue capacity from our East Providence facility and from inventory of nearly \$150 million, which allows growth of 25% above today's revenue levels. We are ready and eager to restart the Plant 2 project as our core market strengthens and as our adjacent and new markets continue to grow and absorb increased capacity.

The third subject today is our long-term strategy and related goals. Our strategy is to leverage our Aerogel technology platform. Our initial success came in the subsea, refinery and petrochemical areas where substantial growth opportunities still remain. Our compound annual growth rate from 2008 when we introduced our mainstay Pyrogel and Cryogel products has been greater than 20% and we believe we are well positioned to resume substantial growth in these core markets as the energy sector builds momentum.

During the downturn in energy, we have focused both on strengthening our position in our core market and on expanding the number of end markets we serve. Our first effort has been in adjacent markets, specifically LNG and district energy, where we are able to utilize existing products and distribution channels to diversify our revenue base. By year end 2016 we will have delivered on three substantial LNG orders and we believe that these wins demonstrate the important role we will play long term in the LNG market.

District energy where steam is generated centrally and distributed through a tunneled system to a complex of buildings, is an adjacent market where the thin profile and hydrophobic nature of Pyrogel are winning characteristics. After introducing our products to the district energy market in 2015, we anticipate that we will more than double our revenue in 2016 as we continue to build a portfolio of successful projects. In addition, we remain on track to launch in the second half of 2017 a product specifically designed for the large and attractive power industry, an end market that consumes more than \$1 billion of insulation per year.

The LNG, district energy and power markets are examples of our progress thus far in developing adjacent and high value markets to supplement our core refinery, petrochemical and subsea work.

We are also focused on utilizing partnerships to diversify our sources of revenue. Our goal is to leverage our Aerogel technology platform to create Aerogel enhanced products to enter new markets using a partnered approach. Our recently announced BASF agreement, for example, positions us for success in the building materials market. The commercial, technical and financial characteristics of the BASF agreement are important components for future agreements with other world-class companies. We will continue to take a partnered approach to develop a number of interesting commercial opportunities beyond our energy infrastructure and building materials market in order to fully leverage our valuable Aerogel technology platform.

On a related note, we commissioned during the third quarter a full-scale pilot line at our East Providence facility which will be dedicated to creating next generation products and to improve the yield, throughput and manufacturing costs in our production facilities. The pilot line will be an important asset for research and development as we leverage our Aerogel technology platform with category-leading global partners to create next generation Aerogel products for existing and new markets.

Overall, we are confident that the strength of our technology and the ROI that we bring to our end users across multiple markets will enable solid performance for our company for years to come. We will maintain our commitments to grow profitably, to prudently scale up our operations and to remain financially strong. We believe the temporary pause of our Plant 2 project is both wise and consistent with these commitments. We are well positioned to leverage the anticipated recovery in the energy sector and to continue to develop valuable, adjacent and new markets. We have a strong team of people and we are confident in our ability to execute our strategy and to realize our vision for the Company.

Now, I'll turn the call over to John for a review of our financial results. John?

John Fairbanks:

Good afternoon. As Don highlighted during his comments, we operated well in the third quarter and made solid progress in our goal to expand and diversify our business. Despite a 6% decline in total revenue, we grew gross profit by 24% to \$6.4 million, achieved a 22% gross margin, a full 6 point improvement versus the third quarter of 2015. Our net loss of \$3.1 million increased and Adjusted EBITDA of \$1.5 million decreased versus last year, but reflected \$1.1 million of expense associated with our patent enforcement action. Excluding these patent enforcement costs, our net loss in Adjusted EBITDA would have improved versus the third quarter last year. And importantly, we completed the pilot line in our East Providence facility, initiated our joint development efforts with BASF and prepared for the launch during the second half of 2017 of our new product optimized for the power market.

I'd like to start by running through our reported financial results for the third quarter and the first nine months of 2016 at a summary level. Second quarter total revenue declined 6% year-over-year to \$29.6 million. Third quarter GAAP net loss was \$3.1 million or \$0.13 per share versus a net loss of \$2.5 million or \$0.11 per share last year. Third quarter Adjusted EBITDA was \$1.5 million compared to \$1.7 million a year ago. However, our results in the third quarter of this year reflected two notable items. First, during

the quarter we incurred and expensed \$700,000 of financing costs as a result of our decision to temporarily delay the Plant 2 construction project and related financing. During the quarter we had completed negotiations and documentation, had all approvals in hand and were prepared to close the debt facility required to fund the project, however as Don discussed, we decided to temporarily delay both the project and the financing to better align the planned capacity expansion with our assessment of demand during the 2018 to 2020 time period.

Second during the quarter, we incurred \$1.1 million of patent enforcement costs versus \$200,000 last year. If we had not incurred these financing and patent enforcement costs, our net loss would have improved to approximately \$1.3 million in the third quarter of 2016 versus \$2.3 million last year, and Adjusted EBITDA would have improved to approximately \$2.7 million in the third quarter of 2016 versus \$1.8 million last year.

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.

For the first nine months of 2016, total revenue increased 6% to \$90.1 million, driven by growth in shipments to the multi-year South Asia Petrochemical Project. GAAP net loss improved to \$6.3 million or \$0.27 per share in 2016 versus a net loss of \$8.1 million or \$0.35 per share last year. Adjusted EBITDA for the first nine months of 2016 was \$6.1 million, up from \$3.7 million a year ago.

Again, net loss and Adjusted EBITDA for the first nine months of 2016 improved versus last year despite the increased in patent enforcement costs and financing costs incurred this year.

I'll now provide additional detail on the components of our results. First, I'll discuss revenue.

Third quarter total revenue consists of product revenue of \$28.9 million and Research Services revenue of approximately \$700,000. For the first nine months of 2016, product revenue was \$88.3 million and Research Services revenue was \$1.8 million.

During the third quarter product revenue declined 7% versus last year. Strong revenue in the Asian market led by record quarterly shipments to the South Asia Petrochemical Project was offset by the decline in subsea demand and the recent weakness in the North American and European petrochemical and refinery markets.

During the quarter, shipments increased 13% to 11.8 million square feet of Aerogel blankets while our average selling price decreased by 18% to \$2.44 per square foot. This decrease in average selling price reflected a year-over-year decline in the mix of our high-priced subsea products in combination with an increase in the proportion of our total revenue derived from the South Asia Petrochemical Project which is characterized by project pricing established in 2013 and a high mix of lower priced 5-millimeter product. Manufacturing productivity was strong. Total production during the quarter exceeded 12.4 million square feet of Aerogel blankets, which included an increase of 600,000 square feet of finished goods inventory.

For the first nine months of 2016 product revenue increased 5% versus last year. This growth was due principally to record revenues in our Asian market in combination with renewed growth in the building materials market, offset in part by the decline in subsea demand and the recent weakness in the North American and European downstream markets. For the first nine months of the year, shipments increased by 11% to 33.6 million square feet while our average selling price decreased by 5% versus a year ago to \$2.63 per square foot. Again, the decrease in average selling price reflected the year-over-year decline, the mix of our higher priced subsea products in combination with an increase in the proportion of our total revenue derived from the lower priced South Asia Petrochemical Project.

I'll now turn to Research Services revenue. Our Research Services revenue is related to contract research performed principally for government agencies. Research Services revenue increased 11% during the third quarter of 2016 to approximately \$700,000 and 46% during the first nine months of 2016 to \$1.8 million. This growth was due to the relative value and timing of research contracts versus last year. For the full year, we expect Research Services revenue to be approximately \$2.3 million, representing a 15% growth versus last year. This expectation is reflected in our 2016 full-year financial outlook.

Next I'll discuss gross profit. During the third quarter, gross profit grew 24% to \$6.4 million. Our gross margin of 22% represented an increase of 6 points from the third quarter of 2015. Gross profit was \$19.6 million for the first nine months of the year and our gross margin of 22% represented an increase of 5 full points over last year. The significant improvement in gross margin during both the third quarter and the first nine months of 2016 was due principally to volume growth supported by the third production line, enhanced manufacturing productivity and solid year-over-year improvement in manufacturing yield. In addition, you'll recall that we experienced a CO2 supply disruption last year that temporarily depressed our gross margin by 2 points during the third quarter and by 1 point during the first nine months of 2015.

Next I'll discuss the operating expenses. Third quarter operating expenses grew \$1.2 million or 15% to \$8.8 million. The increase in third quarter operating expense included \$900,000 increase in patent enforcement costs, \$300,000 for increased investment in sales personnel and marketing programs, and \$200,000 for increased research and development activity, offset in part by a \$200,000 year-over-year reduction in all other operating expenses during the quarter. For the first nine months of 2016, operating expenses increased by \$2.4 million or 10% to \$25.1 million. The increase in the year-to-date operating expenses included a \$1.5 million increase in patent enforcement costs and \$1.1 million for increased investment in sales personnel and marketing programs, offset, again, in part by a \$200,000 year-over-year reduction in all other operating expenses during the period.

Overall, the increase in our quarterly and year-to-date operating expenses reflects our commitment to expand, protect and defend our technology, to diversify our markets and to position ourselves to grow.

Next I'll discuss our balance sheet and cash flow. We generated \$3.8 million in cash from operating activities during the third quarter consisting of \$1.5 million in Adjusted EBITDA and \$2.3 million in cash generated through a reduction in working capital investment. This working capital reduction was the result of a \$5.1 million reduction in accounts receivable balances offset in part by investments of \$1.1 million in inventory and \$1.7 million in all other working capital items.

Capital expenditures during the quarter totaled \$2.3 million and included expenditures related to Plant 2 engineering design, equipment to manufacture products for the power market, construction of our pilot line and other betterments and additions in our East Providence manufacturing facility.

We ended the third quarter with \$21.1 million of cash and minimal debt, net current assets of \$39 million and shareholders' equity of \$120.3 million. In addition, our \$20 million revolving credit facility remains untapped.

We are updating our full-year financial outlook for 2016. The total revenue is expected to range between \$118 million and \$122 million, a refinement of prior guidance of \$117 million to \$125 million. Net loss is expected to range between \$9.4 million and \$10.6 million, down from prior guidance of between \$6.8 million and \$8.6 million. Adjusted EBITDA is expected to range between \$5.4 million and \$6.4 million, down from our prior guidance of between \$7 million and \$8.5 million. GAAP EPS is expected to range between a loss of \$0.41 and a loss of \$0.45 per share, down from prior guidance of a loss of between \$0.30 and \$0.37 per share. This GAAP EPS guidance assumes weighted average shares outstanding of 23.2 million shares for the year. This 2016 outlook also assumes depreciation and amortization of between \$9.7 million and \$9.8 million, stock-based compensation of between \$5.3 million and \$5.4 million

and interest and other expense of \$800,000, which includes \$700,000 of financing costs associated with our decision to temporarily delay the Statesboro manufacturing expansion and its related financing. In addition, this revised financial outlook includes between \$3.5 million and \$3.7 million of costs and expenses associated with our patent enforcement action this year.

As always, product mix and the timing of project work can create quarterly and annual variability, and we may incur charges, realize gains or losses, incur additional financing and interest expense or experience other events in 2016 that could cause our results to vary materially from this outlook.

I'll now turn the call back to Blair for our questions and answers.

Operator:

At this time, I'd like to remind everyone in order to ask a question, it is star followed by the number one on your telephone keypad. We will pause for just a moment to compile the Q&A roster.

The first question comes from the line of Chip Moore from Canaccord. Your line is open.

Chip Moore:

Hey, thanks folks. I guess just first on '17 clearly you've got a hole there to fill on that large project of \$20 million or so. Can you maybe talk a bit about some of the newer initiatives, building materials, LNG, etc., sort of magnitudes there of potential to help fill that?

Don Young:

Hi Chip, this is Don. Those are three important areas for us. I would just add and remind you that we're also introducing our power product during the year 2017 and while not having an enormous impact on the year we think it will contribute also in helping us fill that hole.

District energy has been very successful for us. We're growing that business substantially. We're creating a lot of good case studies and we think it has, as I had said in the past, the ability to ultimately be a market for us that's measured in the tens of millions of dollars. I'm not suggesting that for 2017 but we will continue to build along those lines.

With respect to LNG, we had a good year here in 2016. You'll remember early in this year I suggested that we would win one and possibly two projects, and as it turned out we will have delivered by the end of the year on three different projects, so I think that bodes well for that industry. Of course that industry is impacted by energy-related activities and so we'll see how that builds out in 2017 but we know in the medium and long term that that will be an important contributor for us.

We are also focused on operationalizing our BASF agreements and you'll remember that those have technical aspects to them but they also have commercial aspects to them as well, and that will be an important area for us to focus on and make progress on to fill that hole that's left by the big petrochemical project.

Chip Moore:

Okay. That's helpful. I guess as we think about Plant 2 and the pause and thinking about these newer areas, I guess what do we need to see in terms of visibility? Is it really on the downstream side to get more comfort, or how are you thinking about that?

Don Young:

We're thinking about it in a few different packets. One thing we've—we'd love to say when quarterly revenue is X in a very quantitative way we're going to pull the trigger. It's hard to do that. It's a little bit more intuitive than that, I think, or a little bit more of a gut feel. There are three areas or indicators that we're looking to. One simply is the maintenance. It's just bread and butter for us. We are very good at that business. We have seen this downturn in this activity even here in the United States that I would say was a little greater than we had anticipated going into the year. But once that starts to turn we'll get a feel for it and those are important assets and our product is important for turnarounds. We think it's inevitable and no doubt a healthier energy market promotes that and moves that along.

Second are projects. As I indicated in my comments, our materials tend to be used a little late cycle in these projects so we have pretty good visibility as RFQs become more active and projects start to pop their head up. We have a great portfolio of projects that we're watching and as these things, again, become more active, we think we're in a great position and we have nice visibility on being able to deliver on those kinds of projects. So that's the second area.

Then as we talked about earlier, the adjacent and the new markets have the ability to absorb significant capacity and so we have a lot of confidence in our ability to execute in those adjacent and new markets. Then again, as I said in my comments, I just want to—a backdrop of the fact that we have the ability with our capacity and some inventory to deliver nearly \$150 million of product in any given year, so that puts us in a strong position to continue to grow as we're waiting for these parts of the market to come alive again.

Chip Moore:

That's helpful. I guess just lastly on BASF, any change to the relationship with the news—I know, I think the \$22 million was subject to you getting debt financing. Any change there? Are you just—how does that work?

Don Young:

Under the supply agreement, the delay of the Plant 2 project will result in an identical delay to the advance payment mechanism under the supply agreement, so when we restart the project and satisfy the financing conditions, the advance payments will commence. Essentially those advance payments are tied to our capital expenditures under Plant 2. But the temporary delay of the Plant 2 expansion will have no other impacts to any other aspects of the partnership. They can still purchase our Spaceloft A2 product; under the supply agreement we're committed to deliver it under that same agreement. They'll continue to provide technical support to us to help us enhance our manufacturing productivity, and during the quarter we kicked off our joint development effort that's focused on next generation products for the building materials market.

So, all of those aspects continue and we remain very excited about the potential of those efforts in partnership with BASF.

Chip Moore:

Great. Thanks for that. I'll let someone else have fun. Thanks.

John Fairbanks:

Thanks, Chip.

Operator:

The next question comes from the line of Sean Hannon from Needham & Company. Your line is open.

Sean Hannon:

Good evening. Thanks for taking my questions here. First one also going back to some of the commentary you provided for '17, just want to make sure that I had understood you correctly. We're going to have a roll-off of a material customer; we could have—I think there are some conditions that will be ultimately flattish, what we're seeing today, for 2017, however the first half of the year could be down year-on-year. Did I hear that correctly?

Don Young:

I think Sean we're indicating that we could see a—we'll have a challenge to maintain our revenue levels for the full year, so we could actually see some revenue decline, and it's really because of that \$20 million challenge on the South Asia Petrochemical Project, but it particularly will be a challenge for us during the first half of the year.

John Fairbanks:

Again, Sean, that's on the backdrop of the 2017 market, as we've said, that is on par with the 2016 market, just in terms of the market dynamic.

Sean Hannon:

(Inaudible) I follow. Okay, then in the same vein, so this will be kind of two years in a row where a certain segment or in this case specific customer creates disruption (inaudible) the revenue growth that you previously had been enjoying. Is there a way at this point in time to maybe identify whether it be specific customers or subgroupings where you could potentially have that type of additional risk going forward? In other words, I'm trying to get a sense of how do we not see a scenario like these one-off exceptions every year unless we have a (inaudible).

Don Young:

Sean, I think it's a good, fair question. I think as we have said many times, the importance of our diversifying our revenue from that core, from that subsea, from that petrochemical, from that refinery, that's our core. The adjacent markets tend to have a little less direct impact by energy prices or energy spending. Maybe not LNG but certainly district energy and building materials kind of march to a little bit different tune, and so I think those efforts to diversify into additional new markets will also be important.

I can tell you at least for—looking forward, we do not anticipate having such a large block, if you will, that was represented by subsea in 2015 and the South Asia Petrochemical Project here in 2016. That project, you know Sean, has been going since the beginning of 2014 quite steadily and we know it will taper off here soon.

Sean Hannon:

Okay. All right, great. Thanks very much. Thanks for taking my question.

John Fairbanks:

Thanks Sean.

Operator:

The next question comes from the line of Eric Stine from Craig-Hallum. Your line is open.

Eric Stine:

Hi Don. Hi John.

Don Young:

Hey Eric, how are you?

Eric Stine:

I'm fine. I just wanted to touch on Plant 2, and I don't know if this is something you can give color around or not, but it sounds like in your remarks the temporary delay but then some of your other remarks make it sound like it potentially could be maybe it's a year, maybe it's longer. I mean any way, or are you able to quantify kind of what your gut feel is now in terms of that delay?

Don Young:

It's a hard question, Eric, in the sense we're reluctant to give, to guess. Again, we have adequate capacity in our existing asset to grow 25%. We also know that as we see projects coming alive again we tend to serve those towards the tail end of those projects so we should have good visibility on those projects as we start Plant 2 again. It's not unrelated of course to the energy market overall so I think it's just hard for us to predict that and we're just reluctant to say two quarters or three quarters or four quarters.

Eric Stine:

Okay. Just sticking with that, within that 2017 outlook on the refinery side, I know near-term here cautious but from a few other companies actually have heard the expectation that you're going to see refinery turnaround activity pick up, or the expectation that it will pick up heading into 2017. I mean I'm just trying to square those two viewpoints. As you look at 2017, do you think that—are you kind of anticipating flat versus 2016 activity? Or within that are you anticipating that there is some growth although it's probably modest.

Don Young:

I think, again, we're looking at it very similarly to the 2016 market. We know we have a very good value proposition. We will put that price increase in place again, which not a lot of companies have the ability to do in these relatively tough markets, and we'll continue to take market share in that area. We would like to see growth in these areas and we too have heard and we hear it in the market and we hear it from analysts in that market that those markets could come alive again during 2017. In our planning, we're being careful, we're being conservative in that area. We're just gauging it to be flat for our planning purposes, but we'll be ready if it's better than that.

Eric Stine:

Understood. Okay, thanks for that. Last one, just related to LNG, I know you've delivered the two projects; you're looking to deliver the third. Is that third one, curious whether it's a re-gas or it's export, and just thoughts. Does the margin profile differ at all whether it's re-gas or export, or is it pretty much similar? How should we think about that?

Don Young:

It is similar. It's an export facility and I think we will deliver most if not all of it here during Q4. It may straddle into Q1 a bit, so in this year we will have had one receiving terminal and two export facilities under our belt. Again, we've also done maintenance work in years prior so we feel we have the case studies and the success stories now with some of the major engineering companies and owners of those assets. Again, we think that we're in a great position to grow and participate in that industry over a long period of time.

Eric Stine:

Got it. I would assume—you've talked about it a little bit in the past but just given the characteristics of the product, floating LNG is an area we should look for, I would think, going forward.

Don Young:

It's a nice area, right? Because space is so important, weight is important. A lot of characteristics that are primary attributes of our material suit us well in that market. We install rapidly. We install easily. Some of those factors I think play a nice role in those FLNG opportunities.

Eric Stine:

Okay. Thanks a lot.

John Fairbanks:

Thank you, Eric.

Operator:

Your next question comes from the line of Robin Schumacher from KeyBanc Capital. Your line is open.

Robin Schumacher:

Thank you. Wanted to see what this means, the delay, from cash flow perspective. I had—and I'm not sure whether these are numbers I got from you guys, but something like \$15 million of cap ex related to Plant 2 in 2016 and \$36 million in 2017. So what is—if we don't go forward here with any long lead time items or anything like that, what does the cap ex picture look like for this year and next year? Assuming you don't start up next year.

John Fairbanks:

Sure, Robin. So our spending for 2016 would be relatively consistent. The bulk of our Plant 2 related capital expenditures in 2015 and 2016 were for the engineering designs for the plant, and so we have just completed or we'll just complete those designs. They'll be in a position where we'll be able to take them off the shelf at the time we restart the project and so they have value to us moving forward.

We should spend roughly \$14 million to \$15 million total this year in cap ex for the year, and we'll see a significant decline in capital during 2017 until we restart the plant. Right now we'd expect capital to be down in the range of about \$6 million in 2017, so we'll have a significant step function decrease in cap ex because of the delay of the Plant 2 project.

Robin Schumacher:

Okay, so tough year maybe from a market standpoint but pretty, I would think—that means some free cash flow possibly. But in any case, certainly you maintain strong liquidity.

Don Young:

Definitely a strong balance sheet, Robin, and again, we think that's an important attribute during an uncertain time for the energy business that you know well.

Robin Schumacher:

Okay. On the patent enforcement, obviously we're going to spend some money there in the first part of '17. Is there a way to quantify that? Do you have a—I think you have a court date set and once that decision is made is there any kind of continuing expense? I mean obviously it will come down from the pace it is now but what do you anticipate there in '17?

John Fairbanks:

Sure. So, Robin, we had given guidance in 2016 that the ITC and the German actions for the full year will run at about \$3.5 million to \$3.7 million, of which we incurred about \$1.7 million in the first nine months, so that puts us on pace to spend between \$1.8 million and \$2 million in the fourth quarter of 2016. Our attorneys are at present, both in the US and in Germany, are fully engaged in preparation for the hearings and trial. As you mentioned, you'd expect the hearings and the trials to occur commencing in 2017, and so that pace of spending will be maintained and even potentially accelerated in early 2017 as we go to trial, as we head into the hearings.

At present, we estimate that our patent enforcement costs and expenses during '17 could cost up to about \$3 million additional to what we've already—we expect and had guided in 2016, and about two-thirds of that expense could come in the first quarter of the year. So there'd be heavy spending in prep or final preparation for trial and obviously for legal support during the trials.

Robin Schumacher:

Okay. Thanks a lot. I appreciate it.

John Fairbanks:

Thank you, Robin.

Operator:

The next question comes from the line of Sean Meakim from JP Morgan. Your line is open.

Sean Meakim:

Hi. I was just hoping we could talk a little bit more about the timing on Plant 2, just thinking about from the trigger point to getting back on track with where you were today, kind of almost at the point of putting shovels in the ground. How much of a time lag should we expect from that next decision point? I guess I'm just trying to get a sense of your ability to impact, looking beyond 2017, looking to be able to impact 2018 depending on how things unfold.

Don Young:

Exactly. The next important step is the purchase of the long lead time items. So, this was a very logical point for us to pause, if you will, as opposed to mid-construction where you have something half built. We believe that it would take us between seven to eight quarters to have that facility operational from the moment we pull the trigger. I hope that gives you some sense for the timing and the next steps involved. As John indicated in his comment just a moment ago, the work that we have done to date is valuable and will be implemented in the second plant. Again, same location and all of those types of things. Again, we're eager to get this thing started.

Sean Meakim:

So permitting, financing, all those things are factored into this seven to eight quarters, or those need to be lined up before the seven to eight starts?

Don Young:

The permitting, the construction project, engineering, permitting and construction, long lead time equipment are all factored in. We would have to get the financing put in place again but I think that would not extend that time period significantly. I think given the success that we had in terms of being prepared to implement financing, we know we could secure it quickly and proceed with the project without much delay.

Sean Meakim:

Got it. Okay. Thank you for that. Then just I was hoping we could maybe touch a bit more on the refining weakness that you're seeing up there. In North America we've been waiting for this catch-up and turnaround activity for at least a few years now but it does seem like it's more likely to arrive in '17. Just hoping you could elaborate a bit more on what you're seeing in terms of weakness for refining and petrochem, I guess in North America but you also highlighted Europe as well.

Don Young:

Yes. It's been the US market that we've been most focused on and working our distributors, our contractors, our end users to make sure we understand what's going on. We believe that—and from the work that we've done and the conversations we've had, we believe that insulation materials going into the US market, refineries and petrochemical plants, was down somewhere between 20% and 30% here in 2016, a substantial number, and as I said in my comments, our revenue is roughly flat in 2016. Again, we've been the beneficiaries of our price increases and market share gains to kind of hold our own, if you will, during a tougher period.

We feel like we're well positioned to—when those turnarounds do come we're ready to go. We've got the product. Again, we have a hunch that 2017 will be a good year, especially maybe in the second half of that year.

Sean Meakim:

Okay, fair enough. Thanks, Don.

Don Young:

Thank you.

Operator:

Your next question comes from the line of Shawn Boyce (phon) from Nextmar Capital (phon).

Don Young:

Hi Shawn.

Shawn Boyce:

Good evening guys. I want to switch over to gross margin for a second. In terms of the 22% we just did, we had mix shift that you mentioned. It looks like the implied guidance is probably going to be around that level, maybe just a little bit south of that for Q4—that's my own assumption. If you could, just help us on gross margin as we think about December quarter and then more importantly into next year.

John Fairbanks:

Sure. During 2016 I think you've identified our gross margin has run about 22% for the year but we have seen swings. We were at 20% in the first quarter, 24% in the second quarter, 22% again in the third quarter. The variability really has come from the proportion of our total revenue in the quarter that was driven by the South Asia project. I think as we had mentioned, that project has project pricing that we established back in 2013 and it has a high mix of lower-priced 5-millimeter product, so the gross margin on that piece of business is slightly lower than average. So as that mix has been more substantial in any given quarter, it's driven our margin down. That's really that fluctuation.

But for the fourth quarter, we expect a very strong mix of the South Asian project again, and so margins in the lower end of that range that I gave you of the 20% to 24% is a good place to sort of set the expectations given the strength of the business we expect in Q4.

In terms of margins next year, the economics of our business are really strong. Our manufacturing plant is operating well, productivity is high, yields are high. As Don mentioned, we're getting our price increases. We're sustaining those price increases, and so the biggest issue we have in terms of margin next year is volume. We've got a high degree of fixed costs in our plant and so to the extent that we see any decreases in volume, it will have sort of a magnified effect in terms of our gross margin into 2017.

We'll take all actions required. Obviously the first one was the delay of the Plant 2 project but we'll be very aggressive in terms of how we address that potential margin decline based upon volume in 2017.

Shawn Boyce:

Got it, okay. In terms of the ITC expenses, it sounds like those potentially peak Q1. At this point though can we really forecast any kind of tail beyond that? I guess I'm really trying to look out further and maybe I'm even asking more of a strategic question as opposed to putting numbers on this. We're going to spend, what? I think we talked about another \$3 million with two-thirds of that in Q1, but beyond say the first half of the year, do we get that down to a more reasonable few hundred thousand a quarter, or is it really just too early to tell?

John Fairbanks:

We have fairly good visibility in terms of potential expenses based upon the actions that are in place at present, so we do expect patent enforcement related expenses of \$3 million for the year; two-thirds in the first quarter, the remainder spread over the last three quarters of the year.

Shawn Boyce:

Got it. Okay, last question from me. Don, did you quantify the size of the LNG revenues for the revenues that we're thinking about in terms of the power market sort in the second half of next year with the launch?

Don Young:

We haven't provided specific segment breakdowns, but in terms of the opportunity for LNG, again, is substantial. We started with maintenance, we've done these three projects. These projects have been kind of in the range of \$2 million, \$3 million, \$4 million, \$5 million each. Think of these as relatively moderate size participation in the projects overall. Future projects could be multiples of that within an LNG complex. So if you think about we started with maintenance and we've participated in parts of these projects that are denominated in the numbers I just said to you. Taking more and more share of a given project can lead to number again, multiples of what I've talked about. I hope that's helpful.

With respect to the power market, it is a very large market and we have not participated in it heavily to date and a part of that issue has been that we were capacity constrained in 2014 and '15 and parts of 2016, but also we came to—we were clear that we had the opportunity to optimize the products for that market. It's slightly different than the refining and petrochemical characteristics, and so we are in the midst of completing that development and the installation of some equipment. So we'll roll that out over the course of 2017, as we've said. It will begin to have an impact on the second half of 2017, but we think that we can participate in that market in a pretty strong, strong way. Again, a market that is over a billion dollars per year in insulation materials.

Shawn Boyce:

Got it. Okay. Thanks guys.

John Fairbanks:

Thank you.

Operator:

Your next question comes from the line of Geoffrey Scott from Scott Asset Management. Your line is open.

Geoffrey Scott:

Good afternoon. Thanks for taking questions. I wanted to follow up on the power generation market. Comments you made in the second quarter conference call and I guess what you're talking about in the release today. Could you provide some color on what is special about your product? What problem does the product solve and what makes the product different? Does the industry also recognize the special nature of your product? Also, are you looking to get into the new build or retrofit market? Then I have a follow up. Thanks.

Don Young:

Sure. What we would expect in 2017 or what I would ask you to expect in 2017 as well is that we will participate in the market. We will try as we have in other markets, in the subsea market we cut into that market with Techné (phon), the leader in the field. In the refinery and petrochemical area, Exxon Mobil is sort of our lead customer, if you will. We were able to demonstrate the merits of our product with those

technically sophisticated companies. We are doing the same thing with BASF and the building materials area.

I think you should anticipate that we will do the same thing with a lead partner in the power business, that we can demonstrate the importance of our product. The importance of it is related to the thermal performance of it, to the lifecycle characteristics of the material, to its excellent thermal properties at these higher temperature ranges that are inherent in these power operations. So that's how we'll go about it. We think we've got a pretty good template from some of the earlier successes we've had in other segments.

Geoffrey Scott:

One of the attributes is, you said lifecycle, so you're going to tell people that it lasts longer than an existing product. That sounds like a very long sales cycle. Is that fair?

Don Young:

I think it—you know, lifecycle impacts are always a little harder to demonstrate. We did it with Exxon Mobil very early on and when you have a lead customer who shares the merits of the product. In Exxon Mobil's case, in the refineries, it was our product prowess around corrosion under installation that really set us apart in Exxon's mind.

Yes, it starts with great thermal performance but there are other attributes as well that are sometimes denominated in lifecycle, or sometimes one step before that in total installed cost, the rapid installation of the material. So, again, we do try to separate ourselves from a pure material cost calculation. That—we have a high performance product and we don't necessarily compete on that first cost basis. So I think to your implication, yes, that is a longer sales cycle, no doubt.

Geoffrey Scott:

Okay. The better thermal quality should be a shorter sales cycle and a bit easier to prove. Is that—I guess what gives your product that better attribute with the thermal insulation?

Don Young:

An Aerogel has much greater thermal performance than the traditional materials, calcium silicate, perlite, and so our ability to bring that additional thermal performance for a given thickness is inherent in our flexible Aerogel blankets. Again, very well demonstrated across a whole range of segments, not only the power market.

Geoffrey Scott:

I thought you said that the product for the power market was going to be a little bit different from the product for the other industrial markets.

Don Young:

It is, but it's an adaptation of our Pyrogel product designed very specifically for the temperature ranges that are in power plant.

Geoffrey Scott:

Okay. Is this one of the benefits of having the pilot line part of Line 3 that you were able to develop this in a fairly low-cost and timely manner?

Don Young:

Well, the pilot plan is coming up just during Q3 and we're just now beginning to do experiments on additional products and process improvement in that facility.

In the case of the power facility, we were—we developed the product before the pilot line came on. We have done pilot work though on our existing lines or substituted for having an individual pilot or a separate pilot asset. We've developed that product initially in our labs and then we've been scaling it up over time and so we're prepared again to roll that product out in the second half of 2017.

John Fairbanks:

It actually will. This optimized power product takes a slightly different chemistry and we're going to be able to shake out all the bugs in that chemistry on that pilot line so that when we go to full scale manufacturing we have a strong output, strong productivity and strong yield. So we will definitely get benefit from that pilot line. (Inaudible).

Geoffrey Scott:

(Inaudible) I guess the higher level question was is the pilot line going to allow you to tweak second generation improvements of existing products, or is it going to give you the ability to try to develop completely new products?

Don Young:

Both. It will enable us to produce next generation products for our existing markets and it will also provide the resource for us to explore some of these additional new markets.

John Fairbanks:

It will also allow us to optimize our current manufacturing process and reduce costs as well. It really is a multi-functional tool for us moving forward to improve our—to develop new products, open new markets and increase our gross margin going forward.

Geoffrey Scott:

Okay. I appreciate the color. Thanks guys.

John Fairbanks:

Thank you.

Operator:

I'll now turn the call over to Don Young, Aspen's CEO, for closing remarks.

Don Young:

Thank you, Blair. We appreciate your interest in Aspen Aerogels. We look forward to reporting our fourth quarter and year-end results to you in February. Have a good evening. Thank you.

John Fairbanks:

Thank you.

Operator:

This concludes this conference call. You may now disconnect.