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Earnings Call

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Presentation

Operator

Good morning, and welcome to the Green Plains Inc. Second Quarter 202 Earnings Conference Call. [Operator Instructions] I'll now turn the call over to your host, Phil Boggs, Chief Financial Officer. Mr. Boggs, please go ahead.

Philip B. Boggs
Chief Financial Officer

Thank you, and good morning, everyone. Welcome to the Green Plains Inc. Second Quarter 2025 Earnings Call. Joining me on today's call are members of our Executive Committee, Michelle Mapes, Interim Principal Executive Officer and Chief Legal and Administration Officer; Jamie Herbert, Chief Human Resources Officer; Chris Osowski, Executive Vice President, Operations and Technology; Imre Havasi, Senior Vice President, Head of Trading and Commercial Operations. We're also pleased to have our Chairman, Jim Anderson, join us today to provide brief comments on Board level alignment around our strategy and outlook.

There is a slide presentation available, and you can find it on the Investor page under the Events and Presentations link on our website. During this call, we will be making forward-looking statements, which are predictions, projections or other statements about future events. These statements are based on current expectations and assumptions that are subject to risks and uncertainties. Actual results could materially differ because of factors discussed in today's press release, in the comments made during this conference call and in the Risk Factors section of our Form 10-K, Form 10-Q and other reports and filings with the Securities and Exchange Commission. We do not undertake any duty to update any forward-looking statement.

And now with that, I'd like to turn the call over to Jim Anderson.

James David Anderson

Thank you, Phil. Hello to all. Thank you for joining our call. Q2 has been an active quarter. The team has been adjusting the Green Plains' asset base, which has required existing some activity -- exiting some activity and assets that are not consistent with our plan. We've also adjusted our SG&A expense, which is never easy, but has to be done.

Our go-to-market strategy has also changed. The execution of the company's plan is centered on changes to our culture, which starts with a continued focus on operating safely, followed by a laser focus at fast-acting numbers-driven decision-making process. This new culture demands top-shelf real-time communication, so everyone in the company is clear on the results and the strategy and tactics we're using to deliver our strategy. The Board has been very impressed with the leadership of the executive team and the speed and effort the entire Green Plains company is used to deliver on these positive changes.

The company's daily and weekly reporting structure zeroes in on the most critical measurements for every area of the company. The critical measurements of the company we use to assess our progress have shown material improvement. I want to formally thank all of the Green Plains team for their daily engagement and the pride they have in their company and each other. There have also been several market changes, including government policy, which have improved our prospects.

Finally, I want to report on the CEO search process. The Nom-Gov Committee and the rest of the Board have spent significant time on this process and are in the final stages of our CEO search. It is our expectation that we'll be in a position to announce our new CEO in the very near term.

I'm pleased to hand the call over to Michelle Mapes to begin our review of the quarter.

Michelle S. Mapes

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Interim Principal Executive Officer, Chief Legal and Administration Officer & Corporate Secretary

Thank you, Jim. We entered the second quarter with a clear focus, narrow the aperture of our business to core operations, unlock liquidity through noncore asset monetizations and deliver measurable progress on our path to improving profitability. That is exactly what we are doing.

Important to the enhancement of our future earnings power is our carbon strategy, and we have made material progress. The construction of our CCS infrastructure is on schedule with all major equipment on track and key installations underway. As you would imagine, in a project like this, there are daily changes, and you can follow it on our website. All indications point to a start-up during the fourth quarter, which we believe will unlock consistent cash flows and long-term value. We are in discussions with counterparties on monetization of our 45Z carbon credits for '25 and '26. Based on those discussions and indications in hand, we believe we are in a good position to capture our anticipated pricing for these credits as the projects start up.

During the quarter, the federal government created more clarity on their policies that has positively impacted our strategic investments to reduce CI. Of course, the most notable occurred on July 4 when the President signed into law the One Big Beautiful Bill Act. This legislation includes several favorable provisions for the renewable fuel sector, particularly confirmation and extension of the 45Z clean fuel production tax credit. The credit has been extended through 2029 and includes full transferability and the notable removal of the indirect land use change penalty, which improves CI by 5 to 6 points. The bill also eases qualified sale language and restricts eligible feedstocks to those sourced under USMCA, ring-fencing the feedstock sourced in North America. With the reforms enacted, the Treasury Department will propose and finalize regulations.

With the combination of efficiency gains and CI improvements at our plants, along with the policy changes, we believe our annualized EBITDA contribution from our decarbonization strategy will be greater than $150 million annually for 2026 from our Advantage, Nebraska plants alone. Further, we expect all nine of our operating plants to qualify for the 45Z tax credits in 2026, which will provide additional upside to our projections.

As we discussed in Q1 and reported again for Q2, we are achieving our cost reduction strategies. We have met our $50 million target through a combination of OpEx reductions at our plants and SG&A efficiencies. The organization is committed to continuous improvement and are executing plans to streamline our business further. We are confident we will end fiscal year '25 with a run rate for corporate and trade SG&A in the low $40 million. Most get confused believing cost reduction programs are just about removing people. By far, the biggest impact comes from constantly testing the need for all of the processes used to run the company. Continuous improvement demands removing things that don't add value, repurposing people and efforts to things that do add value.

During the quarter, we executed several noncore asset sales, including our GP Tharaldson joint venture and Proventus and took an impairment on our Hopewell asset. While we took a noncash charge for these items, it raised liquidity and eliminates time wasted on noncore activities and a drag on future earnings. We also completed a sale of RINs in the quarter that had accumulated over the last several years. Combined, these actions bolstered our liquidity and reinforced our commitment to a disciplined capital allocation strategy and helped increase our focus on the core business.

Finally, we successfully extended the maturity of our junior mezzanine notes. We are maintaining our plan to repay these notes. The range of alternatives includes financing solutions and/or monetizing additional assets that would provide the funds to fully retire the debt. The company and the Board concluded obtaining a short-term extension was the best tactic to our strategy as we believe executing carbon capture monetization will provide better options for a longer-term solution.

While evaluating liquidity levers with our Board of Directors, we recently filed an S-3 registration statement. This is a regulatory requirement to maintain future optionality as we and our Board of Directors continues to evaluate how we finance and grow our business long term. No plans to issue securities pursuant to the shelf following effectiveness have been made at this time.

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With that, I'll hand it over to Phil to review the financial results.

Philip B. Boggs
Chief Financial Officer

Thanks, Michelle. For Q2 2025, we reported a net loss attributable to Green Plains of $72.2 million or $1.09 per share versus Q2 2024 a loss of $24.4 million or $0.38 per share. These results include $44.9 million in noncash charges related to the sale or impairment of certain noncore assets and the sale of an equity method investment. The results also include $2.5 million in onetime restructuring charges related to our cost reduction and efficiency improvement programs we've executed. Through our objective analysis, we believe this investment will return well for Green Plains.

During the quarter, we strengthened liquidity through execution of noncore asset sales while sharpening our focus on our business using a fast-acting numbers-based decision-making process, managing the daily measurements we feel are most important to each area of our company. Communication and teamwork provide the foundation to outstanding companies and organizations, and we have worked every single angle to increase both in Green Plains.

We also improved our working capital position by more than $50 million through various initiatives, including the transition to a third-party ethanol marketing provider and the intentional management of our balance sheet with a cross-functional team.

Revenue for the quarter was $552.8 million, down 10.7% year-over-year. Our Q2 revenue was lower because we exited ethanol marketing for Tharaldson and placed our Fairmont ethanol asset on care and maintenance at the beginning of the year. This naturally reduced the gallons that we had to market.

Adjusted Q2 2025 EBITDA, excluding the restructuring charges and noncash charges, ended at $16.4 million compared to Q2 2024 of $5 million. SG&A totaled $27.6 million, which is a $6.3 million improvement from prior year. As we explained in Q1, we expect this to continue to improve through the rest of the year and remains on track to exit the year at a corporate and trade SG&A target of the low $40 million area and a consolidated SG&A target of $93 million. Q2 2025 depreciation and amortization finished at $27.6 million, which includes a $3.1 million impairment of property and equipment recorded in the Ag and Energy segment related to the closure of a noncore feed business.

Interest expense was $13.9 million, an increase of $6.4 million over the prior year, which was primarily driven by expenses associated with the accounting treatment for warrants related to the $30 million revolving line of credit and the prior extension of the junior mezzanine debt as well as the absence of capitalized interest from prior year project construction.

We had an income tax expense of $2.3 million. Our federal net operating loss balance of $222.6 million will provide future tax efficiencies. Our normalized tax rate going forward is expected to remain in the 23% to 24% range.

On the balance sheet, our consolidated liquidity at quarter end included $152.7 million in cash, equivalents and restricted cash, $258.5 million in working capital revolver availability, which is designated primarily for financing commodity inventories and receivables within our business. And we had $93.3 million in unrestricted liquidity available to corporate, inclusive of the $30 million line of credit that expired on July 30. But note that since the end of the quarter, we collected $23.5 million in cash related to the sale of our Tharaldson JV.

Capital expenditures in Q2 were $11 million, including maintenance, safety and regulatory investments. For the remainder of 2025, we expect capital expenditures to be approximately $10 million, which excludes the carbon capture equipment for our Nebraska operations, which are already fully financed. As of June 30, 2025, our balance sheet has broken out the carbon equipment liability, which now stands at $82 million, up from $17.9 million at 12/31. This is the natural result of the ongoing progress in the project. The compression assets are recorded in property and equipment, but since these are funded directly by Tallgrass, it doesn't flow through our cash flow statement as CapEx. We believe this provides better clarity to the reader.

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To satisfy our mandate for continuous improvement, we are taking fast and decisive actions across all fronts. continuing our focus to operate safely along with improving efficiency everywhere and disciplined short-term and long-term capital allocation using strict return metrics. We believe this is the best way to return the maximum value to all of our stakeholders.

And with that, I'll turn the call over to Chris for an update on our operations.

Chris G. Osowski
Executive Vice President of Operations & Technology

Thanks, Phil. Q2 marked another quarter of strong operational execution. Continuous improvement is the mandate. Across our fleet of operating assets, we achieved 99% capacity utilization, maintaining the discipline and consistency we demonstrated in Q1. These same plants ran at 93.8% in Q2 of 2024. Our plants produced the highest ethanol yields in Green Plains history, while operating at our second lowest quarterly OpEx costs since early 2023, only better by Q1 of this year. Our improved operational execution has carried over into the third quarter with strong throughput utilization across the platform. This includes improving ethanol and corn yields. We are forecasting to maintain mid- to high 90% utilization for the remainder of Q3.

At our Obion plant, the previously mentioned RTO project was commissioned and the results are exceeding our expectations. The plant has now shown the capability to produce over 3.5 pounds of protein per bushel of corn at the same time, producing at rates over 120 million gallons on an annualized basis. This project is reflective of our commitment to operational excellence that mandates the management of safe operations using a numbers-based team-oriented decision-making process that includes detailed management of the most critical measurements daily.

Our operational excellence initiatives have contributed materially to surpassing our overall $50 million cost reduction goal. Our plant operations team has achieved OpEx reductions of $10 million on an annualized basis. A major portion of these savings are the result of our reengineered maintenance planning and execution strategy. This has reduced our R&M and contract labor spend by disciplined preventative maintenance management, which has increased reliability in our equipment and has built confidence in our team.

We've also achieved reductions in Gen 1 chemical, yeast, and enzyme spend as a result of aggressive recipe optimization. Just like every area of Green Plains, our operations team will build on our improvements daily as we are committed to a culture of operational excellence focused on safety, efficiency, continuous improvement and accountability. We are very proud of the enormous effort and professionalism our operations team has provided. I'd like to thank the team for their huge commitment.

With that, Imre, please take it from here on our commercial and market update.

Imre Havasi
Senior VP and Head of Trading & Commercial Operations

Thanks, Chris. Our markets have improved in recent weeks, supported by strong ethanol exports and supportive policy on 45Z renewable volume obligations and restrictions on imported feedstocks. Combined with the corn crop that continues to impress, ethanol crush margins have expanded in the back half of the calendar year. Industry run rate and yields have stayed high, which as per usual, must be assessed on a daily basis to execute our risk management programs, which include active hedging across our platform. Our disciplined approach to locking in crush margins has yielded a good result. Currently, we are 65% crushed for the third quarter.

Corn oil continues to be a bright spot, underpinning the need to maximize our corn oil yields. The work our plant operations team is doing to consistently produce at capacity is an enormous contributor to the Green Plains margin creation and structure. I want to thank all of them for their huge effort.

Protein values are under pressure with the seemingly never-ending capacity additions provided by the soy crushing industry. We are aggressively executing our strategy to diversify our protein customer portfolio, which after careful analysis, we believe will be additive to our margins. Recently, we loaded our first bulk

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vessel with 6,000 metric tons of Sequence(TM) our 60% protein product, which is on its way to Chile for salmon feed applications.

With that, I'll hand the call to Michelle for closing comments.

Michelle S. Mapes
Interim Principal Executive Officer, Chief Legal and Administration Officer & Corporate Secretary

Thank you, Imre. With respect to our strategic review, having executed numerous streamlining initiatives has positioned us well as all potential paths remain under consideration, including a company sale, asset divestitures or other material transactions.

In closing, I will leave you with this. Carbon construction is on track and monetization efforts are underway, further underpinned by constructive policy updates, providing upside across our platform for low CI fuel production. Our positive EBITDA outlook for Q3 and Q4 has strengthened, driven by our actions, focused execution and aided by favorable market fundamentals. Combined with a full year of carbon earnings, we are confident that our earnings power in 2026 will be fundamentally transformed. We have exceeded our $50 million cost savings goal and continue to identify additional efficiencies as part of our operational excellence and continuous improvement strategy. Our core asset strategy is driving sharper focus and improved asset performance. We have strengthened our liquidity through noncore asset sales and extended the maturity of our near-term debt.

Our strategic review and CEO search are both active and progressing, and we look forward to providing additional insights at the appropriate time.

As you should expect, we are committed to continuing to operate safely, executing a disciplined, fast-acting number-based decision-making process that's fortified by a strong foundation of outstanding real-time communication in all areas of the company. We believe this is the best way to create total company teamwork, confidence in our strategy and each other and shareholder value. We hope through our discussion today, you can see the entire Green Plains team is committed to execution and excellence with a goal of restoring profitability and unlocking value across the Green Plains platform.
Operator, we will now take questions.

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Question and Answer

Operator

[Operator Instructions] Your first question comes from the line of Andrew Strelzik with BMO Capital Markets.

Andrew Strelzik
BMO Capital Markets Equity Research

Obviously, a lot of moving parts here with the sale of the noncore assets, higher corn oil values, the decarbonization coming online, cost saves. So I guess what I was hoping is, if you put all that together, is there a way for you to help us frame the EBITDA potential in the back half of the year and really in 4Q as we think about the run rate into 2026?

Michelle S. Mapes
Interim Principal Executive Officer, Chief Legal and Administration Officer & Corporate Secretary

Thank you for your question, Andrew. Phil, would you like to respond?

Philip B. Boggs
Chief Financial Officer

Yes. Yes, happy to. Thanks, Andrew. Yes, back half of the year, stronger EBITDA margin outlook. It's been supported by rising corn oil prices, continued strong ethanol exports and a corn crop that is looking solid from everything that we can tell. So we have a constructive setup. If you look at overall consolidated crush margins, we're probably sitting somewhere in the mid-teens today for the base ethanol business. And then as we start monetizing the carbon opportunities that starts up sometime here early fourth quarter, here in 2025 before the ILUC starts here in '26, we've previously given an indication that carbon would be about $100 million opportunity.

So if you prorate that for a fourth quarter start-up and take off maybe a few weeks or something relative to the start-up of that, I mean carbon ends up in like a $20 million to $25 million sort of range for fourth quarter. So yes, real strong setup for back half of the year here in terms of crush margins.

Andrew Strelzik
BMO Capital Markets Equity Research

Great. Okay. Great. That was super helpful. And then my follow-up is just about the sale of the stake in the Tharaldson JV. I guess I was just curious for the thought process there. I suppose it was deemed noncore, but I just wanted to understand kind of how you thought about that piece and maybe more broadly, how you thought about valuing that asset as we think kind of about HiPro or kind of more holistically and longer term?

Michelle S. Mapes
Interim Principal Executive Officer, Chief Legal and Administration Officer & Corporate Secretary

Thank you, Andrew. I think as you said, it really is our focus. It was not core to what we were doing. It was not a project that we were managing. And so as you -- as we've talked about, we are making data-driven decisions here at Green Plains, and the numbers basically indicated this was something that made sense for us to exit at this time.

Chris, would you like to add anything to that as well?

Chris G. Osowski
Executive Vice President of Operations & Technology

Yes. I would say that also, we're really focused on this path of operational excellence for our existing assets and driving the yields in our existing MSC processes beyond what was originally planned or expected. And we're seeing those results. The Obion RTO project execution is a good example of that.

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Operator

Your next question comes from the line of Salvator Tiano with Bank of America.

Salvator Tiano
BofA Securities, Research Division

Firstly, I want to clarify a couple of things on the cash flows. I believe we take out working capital this quarter, we had slightly negative cash flow from operations. I wonder if that includes the $22 million from RIN sales or is it any different?

And can you clarify, you made the comment also on the Tharaldson sale. Did you already receive the proceeds? Or are they coming in Q3?

Philip B. Boggs
Chief Financial Officer

The $22.6 million of RIN sales was included in the revenue of our ethanol segment. So it is part of operating cash. It was really part of a commercial optimization strategy that we accumulated those RINs over many years and had an opportunity to monetize those here in the quarter. I wouldn't count on those as being a recurring part of our go-forward strategy. The turnkey asset, we have it in receivables as of June 30. We did collect that money in July. So I just added that comment in just to clarify that -- well, it was sitting in -- it's sitting in an accrued item, not in accounts receivable, but we have collected that cash.

Salvator Tiano
BofA Securities, Research Division

Okay. Perfect. Secondly, I want to ask a little bit about -- well, if you can clarify a little bit, the $100 million number for carbon capture was something that you had mentioned before, and it seems like this could be higher now. So with all the changes in regulations, is there a specific number we should think about? And also, as you have your negotiations with potential buyers of credits, have the discussions about the potential discount, whether that's 50% or 70% or 90% of the face value changed?

Philip B. Boggs
Chief Financial Officer

Sure. For 2026, our carbon number that we've talked about here on this call was $150 million. Previously, we've been talking about a $100 million number, inclusive of $30 million voluntary credits. So the biggest change in that number is driven by the policy change. And so this was the favorable policy updates that we've seen in July. The elimination of the indirect land use change penalty adds about 5 to 6 points. So when you factor that in to the 287 million gallons of carbon opportunity from our three Nebraska plants alone, that by itself increases the number by about $30 million. And then we're also continuing to evaluate our starting CI scores. And Chris and his team and operations continue to focus on efficiencies, drive higher yields. So we're doing everything we can to drive lower starting CI scores, which increases our opportunity as well.

So base Nebraska plants alone, I call it 150 million from those three. And then we also have some opportunity across the balance of our platform. We mentioned that all of our plants would qualify for 45Z in 2026. And so that creates some additional opportunity for us. We're still working through all of the final numbers, but even at a base qualification with the rounding that's in place, if the other six plants were rounded to 45 CI points, and we get 5 points. That's worth about $50 million on those 500 million gallons. So additional upside, we'll continue to clarify and refine that number as we go forward, but there's certainly some upside there.

Michelle, if you want to take the monetization piece?

Michelle S. Mapes
Interim Principal Executive Officer, Chief Legal and Administration Officer & Corporate Secretary

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Absolutely. Thanks, Phil. Now we're in preliminary discussions, but things are going to move rapidly, we believe, in the next month or so. There's nothing that we've seen so far that would indicate the values that we are proposing are in question, and we should be able to realize those values.

Operator

Your next question comes from the line of Pooran Sharma with Stephens.

Pooran Sharma
Stephens Inc., Research Division

Congratulations on the progress made thus far. Looking forward to seeing how carbon kind of shapes up here in the back half of the year. Just wanted to understand the monetization a little bit, and you provided some great details thus far. But in terms of how should investors think about Green Plains position in the capital structure project financing waterfall? In particular, what portion of like such financing or monetization is expected to flow to the company versus the project level partners?

Michelle S. Mapes
Interim Principal Executive Officer, Chief Legal and Administration Officer & Corporate Secretary

Phil, do you want to take a shot? And I can follow up.

Philip B. Boggs
Chief Financial Officer

We, the financing waterfall, so we're having significant cash flows that are coming from this project, $150 million. We have that financed with Tallgrass at about a 9% rate over 12 years. So we do have significant cash flows that's going to accrue direct to the company and provide free cash flows that we can then reallocate and we'll continue to review that allocation of capital in terms of continued deleveraging or deploying that into additional growth projects. Again, every project is going to have to compete for capital, but we do expect significant cash flows to accrue from the current monetization efforts.

Michelle S. Mapes
Interim Principal Executive Officer, Chief Legal and Administration Officer & Corporate Secretary

And I would add to that, you can expect what I will call usual and customary operating expenses associated with that, that will be covered. But like Phil said, significant cash flows flow from that. We're not talking about a tax equity financing structure here. It is truly a monetization of the tax credits. So there will be no other takes off of those numbers.

Pooran Sharma
Stephens Inc., Research Division

Okay. Great. I appreciate that clarification. Maybe just for the follow-up, ahead of target on the cost savings, you mentioned $50 million captured already. I was wondering if you could give us a sense of magnitude that you could potentially reach for the year?

Michelle S. Mapes
Interim Principal Executive Officer, Chief Legal and Administration Officer & Corporate Secretary

Jamie, do you want to take that his quick follow-up.

James F. Herbert
Chief Human Resources Officer

You bet. So it all starts with our culture. And one of you heard this morning, the operational excellence theme throughout and embedded in that is a spirit of continuous improvement and KPIs for every aspect of the business. And when I say every aspect of the business, that's operations, commercial, finance, all of the support functions. We've got engaged teams all across the system that are looking at everything from plant-based teams looking at driving utilization rates. And at the same time, they've made significant progress reducing chemical and R&M spend, our finance team driving continuous improvements into the

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cash conversion cycle, our internal IT team continually looking at ways to streamline and simplify software and hardware utilization, decreasing expense.

So in addition to these examples, all driven by highly engaged work groups, we've got broader opportunities given that we're a leaner, more efficient company today. And one example of that is right here in Omaha, the building we're sitting in right now, we're marketing our space. So the bottom line is we're taking a zero-based expense or zero-based approach to our expenses. We're forcing every dollar that we spend across the company to have an ROI associated with it. Chris?

Chris G. Osowski
Executive Vice President of Operations & Technology

Yes. And on top of that, in terms of operational excellence opportunities, we still work on the blocking and tackling of running ethanol plants and managing planned and unplanned downtime to improve overall plant utilization, and we expect to continue to improve in that area going forward.

Michelle S. Mapes
Interim Principal Executive Officer, Chief Legal and Administration Officer & Corporate Secretary

Thank you, Jamie. Thank you, Chris. I would just add to that. As you can imagine, with the streamlining of our operations, there are processes that aren't needed anymore. We continue to test that and eliminate any stuff that's not necessary so that we can continue to be as efficient as possible and bring dollars to the bottom line.

Pooran Sharma
Stephens Inc., Research Division

Congrats on the progress thus far.

Operator

Your next question comes from the line of Kristen Owen with Oppenheimer.

Kristen Owen
Oppenheimer & Co. Inc., Research Division

So Phil, you articulated some of the incremental upside on the carbon opportunity from ILUC and what you can do on the rest of the platform. But I'm wondering how we should think about upside on, say, corn oil pricing versus some of the cross winds that you're seeing on the protein side. Can you give us an update now post Tharaldson sale, like what your corn oil production -- nameplate production capacity is and how we should think about EBITDA sensitivity to that number?

Michelle S. Mapes
Interim Principal Executive Officer, Chief Legal and Administration Officer & Corporate Secretary

Thank you, Kristen. Imre, would you like to respond to that, please?

Imre Havasi
Senior VP and Head of Trading & Commercial Operations

Yes, for sure. I think as we -- Phil alluded to it, the overall margin structure is pretty solid going forward. And with all the supporting components, corn oil, the export program. So we're heading into the next quarters with a good margin structure, of course, leveraging the tailwinds and cheap flat prices of corn that we expect to continue to support us.

Corn oil specifically is 100% going to renewable diesel today. And with the policy changes, that's a product that continues to be structurally supported because there is just a limited supply of that. I think speaking of corn oil, the only risk that we see in terms of maybe not continuing to appreciate and perhaps decline a bit if the soy complex trades lower. And there's only one reason that would happen and as the lack of trade agreements with China. I mean you can just see -- you could see overnight how sensitive the market is to comments about that, the complex rally just as the President indicated that that's a

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commodity or that's a set of commodities that could be leveraged in those trade negotiations. So overall, very positive.

Chris, you can help me out on this one. The Tharaldson joint venture did not contribute as much in terms of oil revenues. There was some marginal contribution based on the agreement we had in that joint venture. It was primarily focused on protein. And we already talked about protein markets. They are more subdued because of the ample supply of competing ingredients. But of course, we're going to be -- our corn oil yields and corn oil production will continue to be strong and at the highest levels. And of course, by exiting the Tharaldson joint venture, we will have less protein to sell. So we'll just manage the portfolio we had prior to that asset coming online. And that allows us to -- that allows us to better optimize our portfolio with less product.

Chris G. Osowski
Executive Vice President of Operations & Technology

Yes. And just to add to that, once again, as part of this operational excellence platform, we've got focused teams monitoring performance of oil yield in plants on a daily basis and putting in corrective actions to boost that yield to what right now is the highest our platform has seen, and we still see upside on that. So that team will continue to work on driving the volume number up and creating value for the organization.

Kristen Owen
Oppenheimer & Co. Inc., Research Division

Just one follow-up question for me. This is our first quarter sort of seeing what bringing on Eco-Energy has done for the business. A lot of moving pieces in the OpEx line. So any early sort of learnings or proof points that you can share with us on that transition?

Philip B. Boggs
Chief Financial Officer

I'll take that first. One of the key benefits that we've seen is the improvement in working capital. So our finished goods inventory is lower and our accounts receivable are lower. We're achieving that $50 million or greater working capital benefit that we pointed to on the last call, which had occurred shortly after we had started putting that in place. So that has certainly driven some efficiencies, lowered our working capital borrowings, lowered our working capital financing costs. And then we're also seeing just greater level of efficiencies with regard to how we account for all of that in terms of the back office. So we've driven those efficiencies through the organization. Q2, you see some of that come through the bottom line. But since we implemented it in April, you don't see a full quarter benefit from that. So that will start coming through in the third quarter.

And then Imre, if there's any commercial points that you want to add to that and how that structure is working, that would be great.

Imre Havasi
Senior VP and Head of Trading & Commercial Operations

Yes, for sure. We're very excited about this arrangement and collaboration. I think on the commercial front, as you can imagine, initially, first few weeks, it was more operationally focused and just getting the process more efficient. We have -- we continue to work on that. But right now, the focus is more on how we create value together and how this collaboration will benefit both organizations. We're seeing already benefits in terms of reductions in supply chain costs, access to markets that we have not had access to, a slight improvement in prices back to our plants. And now, as you can imagine, the focus is entirely on making sure that as 45Z kicks in, as carbon capture kicks in and 45Z kicks in for us, we seamlessly execute to capture those benefits. So it's just all high notes. I'm very excited about that collaboration and working together with Eco.

Operator

Your next question comes from the line of Eric Stine with Craig-Hallum Capital Group.

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Eric Stine
Craig-Hallum Capital Group LLC, Research Division

So maybe just starting on the 45Z. I mean you've mentioned ongoing discussions, and it sounds like progress to the point where you've got pretty good visibility into some near-term activity or things that you can share. Just curious, I mean, what does that potentially look like given that you are still waiting on treasury guidance to dictate the value of those credits. Just any thoughts on that? I mean, is that -- is your commentary showing confidence that, that guidance is soon? Or is it more nuanced than that?

Michelle S. Mapes
Interim Principal Executive Officer, Chief Legal and Administration Officer & Corporate Secretary

Thanks, Eric. Basically, I would say we're in a situation where the market does expect that guidance to occur. They do expect that guidance to occur sometime in the foreseeable future by the end of the year. Depending upon who you talk to, you can get a different answer if it's coming this week, next week or 12/31. I think you will see some sort of small differentiation between '25 and '26, generally related to the fact that there is the lack of guidance from treasury, but nothing significant in terms of overall value is really how we are thinking about it.

Eric Stine
Craig-Hallum Capital Group LLC, Research Division

Got it. Okay. And then maybe second one for me, just kind of high level when you think about high proteins and you obviously, you talked about the market environment currently as it stands today and maybe updated thoughts on optimal mix between 50 Pro and Sequence. Obviously, in some -- for some end markets, you're pushing higher than that, but would love to kind of get an update on what your thoughts are going forward.

Michelle S. Mapes
Interim Principal Executive Officer, Chief Legal and Administration Officer & Corporate Secretary

Imre, you take that, please?

Imre Havasi
Senior VP and Head of Trading & Commercial Operations

Absolutely. I'll start with the comments that have been made on this call by different team members here in terms of how we make decisions, fact-based doing the commercial and financial analysis of what our portfolio should look like. We've been using those methods more and more in the last several months to see what is that -- exactly to your point, what is that optimal product portfolio is going to look like. And as you can imagine, that depends on both on how we make it, what's our lowest cost approach, considering the overall portfolio of products, right, including ethanol and corn oil, et cetera, and also what we can get in the marketplace. A lot of things have changed, of course, in the 50 protein space, a lot more competing ingredients, a lot more pressure. Sequence, 60% protein has a lot more value. But again, that also depends on how much it costs for us to make it.

So we have our target customers. We continue to target the aqua industry for Sequence and some of our 50 protein products and then [PAD] for the 50 protein. So how is that going to shake out and what that combination and portfolio will look like? Like I said, that will depend on the economics of both products. But we're actively working on defining that.

Now of course, where there's value is when you have strategic partnerships. So once we build those strategic partnerships, take Chilean salmon, for example, then that's for the long term. So we're not going to be transactional with some of our customers, and that's one of the other goals is to continue to build out those strategic partnerships with large pet food customers and large salmon feed companies so that we can build that long-term relationship that's higher margin and beneficial for both. That's the commercial input.

I don't know if Chris has anything to add from an operational side. perspective or feel from it?

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Chris G. Osowski
Executive Vice President of Operations & Technology

Yes. I think in terms of operations, the more we've had opportunity to produce the 60 Pro Sequence product, the better we've gotten at doing it. And specifically, with respect to managing changeover and/or campaigns of the product, we've gotten more precise in the process changes needed to get the purity to the necessary level to make inspect product. And in doing so, we're effectively lowering the OpEx cost of making that Sequence material. So the more we make it, the more effective we get at doing it. And as a data-driven organization, we'll make the best decisions for the product mix for each plant that we have.

Operator

Your next question comes from the line of Matthew Blair with TPH.

Matthew Robert Lovseth Blair
Tudor, Pickering, Holt & Co. Securities, LLC, Research Division

It sounds like hedging was a tailwind in Q2. Could you help us quantify the benefit there? What was there, a gain? And then so far in the third quarter, are you able to disclose what kind of volumes you've locked in or what kind of EBITDA contribution you would expect in the third quarter?

Michelle S. Mapes
Interim Principal Executive Officer, Chief Legal and Administration Officer & Corporate Secretary

Go ahead, Imre.

Imre Havasi
Senior VP and Head of Trading & Commercial Operations

All right. I'll start with that. Q2, we also -- as we alluded to it, margins picked up relatively slowly. I mean we were expecting a margins to pick up a little faster considering the seasonality and the summer demand for our product and for blending. I would say that Q2, we hedged and those worked. The way we hedge -- and actually, our hedging volume wasn't as huge in Q2 because margins were not as great. So we did hedge on, for example, on days when we had an opportunity to lock in maybe a few cents higher margin. We also -- that's simple crush, right? So that's the ethanol and price and ethanol financials and corn futures. So the volumes were not as huge, like I said, because the margin -- simple crush margin wasn't as attractive and it just continued to improve throughout the quarter.

We did manage to a, I'm not saying short, but we had a lot of unsold corn oil position that as corn oil appreciated in the second half of Q2, that helped enormously. And you can consider that as a hedge of not hedging, right, or not selling flat price. And then our corn ownership was at or below market. I think when you add it all together, we had a small benefit, I think, in Q2. But like I said, we didn't really hedge larger volumes because of that margin just not being at levels that we considered favorable in Q2.

In terms of Q3, that's a whole different story. I think you guys follow the market and simple crush things picked up quite a bit at the end of July. Of course, July is behind us. But as margins -- Simple Crush appreciated, we put on a lot more hedge. So we're seeing -- we said in our prepared remarks that we are 65% crushed. Of course, July is done. So that's part of it. But at current levels or as we were approaching current levels, we got a bit more aggressive. So we locked in margins for a good part of August in the last two weeks -- within the last two weeks as well as some of September.

And let's not forget, we're looking at a lot of different things, how the market is behaving, what are the fundamentals, technical analysis as well as what the corporate goals are in terms of different financial thresholds to help our earnings, and that's why we are locking those in. But we're 2/3 closer to 70% in the last few days margins locked in for the quarter at levels that are very close to where the market is today.

And again, just last comment, it's not just that simple crush, the ethanol price and corn futures, it's everything else, corn bought, DDGs sold, corn oil getting priced at current levels that are very attractive.

Operator

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Your next question comes from the line of Craig Irwin with ROTH Capital Partners.

Craig Irwin
ROTH Capital Partners, LLC, Research Division

My question is around cash needs in the third quarter. So I guess last quarter, you had the $50 million benefit from working capital from a marketing partner and then you had the $26 million from RIN sales. So now we've got Tharaldson, the asset sale there. How does this factor as far as the sequential cash use in the third quarter relative to the first and second quarters?

Philip B. Boggs
Chief Financial Officer

Cash flow will continue to be positive based on current markets right now. So where we've seen crush continue to expand, that's very positive to our overall cash flow situation. So when I think about just base free cash flow for Q3 and Q4, we should be strongly positive where we were certainly negative in the first quarter, but that's turned around here nicely, Q2 beginning to benefit like Q3 and Q4 much better than the first half of the year.

Craig Irwin
ROTH Capital Partners, LLC, Research Division

Okay. So then in the third quarter, we should include Tharaldson as a $25 million positive contribution to cash flow? Or is that part of the positive $25 million with the $50 million and $26 million that you showed us for the second quarter?

Philip B. Boggs
Chief Financial Officer

No. The $23 million, $24 million of cash from Tharaldson that we mentioned has been received in July. So that will come through as a positive cash in the third quarter. It was not part of the $50 million working capital improvement that we had that was a result of the Eco-Energy transaction.

Craig Irwin
ROTH Capital Partners, LLC, Research Division

Okay. Excellent. Next question is about the export market. So the loading slate, I understand is actually pretty strong right now, strongest it's been in a few years. says that the market could probably get a little tighter actually over the next number of weeks. Can you maybe give us color on what you're seeing in the export markets? Is this tariff-driven or I guess, trade deal driven? A lot of people don't really want to talk about the trade deals, but I guess if there's market chatter out there and there's activity on people taking early cargoes that might be healthy. What color can you share with us about the export markets and why they're firming so rapidly?

Michelle S. Mapes
Interim Principal Executive Officer, Chief Legal and Administration Officer & Corporate Secretary

Thanks, Craig. Go ahead, Imre.

Imre Havasi
Senior VP and Head of Trading & Commercial Operations

Yes. Well, certainly a bright spot, isn't it, right? We are -- when you look at -- I mean, our projections for the year are around to reach 2.1 billion. That's up from 1.9 billion gallons from last year. And yes, there may be at one point, there's been some early pull in terms of just hedging against tariff, but that's really not the case going forward. We're seeing increased imports of -- or exports into Canada imports by the Canadians. India is up. The EU is up. U.K. is kind of unchanged, but we expect that to be higher and then there are a lot of other customers.

I think the broader picture in my opinion, in our opinion, is that, that's one product. I mean, if you look at the administration and all the trade deals they are negotiating, what can the U.S. export a lot of energy

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and a lot of ag. And I think that will continue to be part of those negotiations. So I think the -- when you talk about how sustainable this export program is, there is a scenario, and I think a likely scenario where we will maintain a strong export program going forward.

And you made a comment about stocks can get tight. Yes, I mean, you need, of course, a bigger buffer when you're loading those larger volumes for exports, and we're getting -- we're heading into fall maintenance. here very shortly. So yes, that's something we have to watch. The industry can certainly run at a higher rate to satisfy those export demands. But as demand grows, the industry will, of course, be a lot more sensitive to supply disruptions. So I think that's something that has to be taken into account.

But just to summarize it, we expect our export program to be sustained going through the end of the year into next year and maybe with a surprise to the upside if some of these trade negotiations conclude and favor ethanol.

Craig Irwin
ROTH Capital Partners, LLC, Research Division

Great. And then last one, if I may. So if you have that much locked away in the third quarter, and we're seeing this kind of improvement, you should have very high visibility on your crush margins in the quarter, be able to frame out for us what a reasonable EBITDA expectation could be for investors. Can you maybe get quantitative for us or toss out a range on what you think is reasonable for EBITDA performance for Green Plains in the third quarter?

Philip B. Boggs
Chief Financial Officer

Craig, as I mentioned earlier in the call, we expect consolidated crush margins to come in, in the mid-teens. July started off weaker, but we've seen crush margins expand in August and September to levels that are similar to where we were for all of Q3 in the prior year. And this is driven by what we're seeing in corn oil, in the corn markets, strength on the ethanol side driven from all of these different factors that we've discussed.

So overall EBITDA margins, I'd call it, somewhere in the mid-teens. I don't want to put an exact number on it, but we've got a good portion of that crushed. And basis what's on paper today, that's where we would land.

Operator

The next question comes from the line of Laurence Alexander with Jefferies.

Laurence Alexander
Jefferies LLC, Research Division

Just one question left on the clean sugar for -- looking at the calendar for the ramp in capacity over the next few years, can you lay out what disclosures you expect to be able to give in terms of volumes, margins, return on capital, cash payback, any kind of metrics and when we might be able to get them given like Shenandoah coming on next year and then the other plants towards the end of the decade?

Michelle S. Mapes
Interim Principal Executive Officer, Chief Legal and Administration Officer & Corporate Secretary

Go ahead, Chris.

Chris G. Osowski
Executive Vice President of Operations & Technology

Yes. With regard to CST, I just first want to reiterate that prior to idling the asset at the beginning of the year, the technology has been proven out to produce food-grade D95 syrup, and we have received all of the necessary food safety certifications for making food-grade product. But with strengthening ethanol margins and what is the highest protein yield in our fleet of plants, we chose to run that Generation 1

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ethanol plant at full capacity. And in order to fully utilize the CST asset, we'll need to make an additional capital investment in order to process wastewater due to local municipality constraints.

So consistent with our capital allocation strategy, which is driven by financial returns, we'll make the appropriate decision on that asset here going forward and plan on revisiting that here in the summer of 2026. But the Shenandoah plant team is really focused on running the asset safely and at very high efficiency. And really, they're in a position to capitalize on 45Z right now. So that's really what we're focused on delivering.

Operator

Your next question comes from the line of Kristen Owen with Oppenheimer.

Kristen Owen
Oppenheimer & Co. Inc., Research Division

It just seemed unfair not to give Jim the opportunity here. So I did want to follow up on sort of what you've talked about in terms of the portfolio, thinking three to five years out, if you can help us understand what are you aligning GPRE to be today? I mean we've seen what's happened in the protein markets. We've seen what's happened in the carbon markets. Arguably, the outlook is much more favorable for you from a policy standpoint. So as you are thinking through this strategic review process, what -- how are you thinking about positioning the portfolio 3 to 5 years from now?

Michelle S. Mapes
Interim Principal Executive Officer, Chief Legal and Administration Officer & Corporate Secretary

Thanks, Kristen. I actually will take that. I appreciate the follow-up question. The strategic review is comprehensive in how we are looking at things. But as we've talked about today, we're committed to doing what we said we were going to do, and much of that includes walking before we run and running out to that 3- to 5-year plan and where we're headed.

So right now, as you can see, we're focused. We're focused on execution. We're focused on streamlining. We're focused on profitability. We're focused on building shareholder value, which that is where the team has been right now.

As you can tell, since the beginning of the year, this company has changed dramatically. And so as we now start to hit our stride with that focus, we are moving into the phase of launching into carbon. And an excellent government program that has allowed us some unique opportunities that we're uniquely positioned in Nebraska to take advantage of. So our low CI biofuel strategy is mission-critical to our 3- to 5-year outlook and who we are as a company as well as continuing to operate our Gen 1 assets safely and in the most efficient manner that brings value to our shareholders. Beyond that, we have to really digest all that we're doing today and where carbon can take us. So that really is where our focus is right now. More to come as we continue to work through the strategic review process. As I noted, it continues to be active.

But as you can imagine, a strategic review process with the type of change our company has gone through can create all sorts of challenges as well as opportunities, which is why we continue to remain open to those opportunities for our shareholders. Sometimes when you're trying to reach the best solution, it's not always the fastest solution, but we are committed to a disciplined process, just like we're disciplined in all aspects of our business.

Operator

I will now turn the call back over to Michelle Mapes for closing remarks. Please go ahead.

Michelle S. Mapes
Interim Principal Executive Officer, Chief Legal and Administration Officer & Corporate Secretary

Thank you. I'd like to thank you all for your participation in today's call. If you have any follow-up questions we were unable to answer, please reach out, and we will find time to connect. Thanks again.

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Operator
Ladies and gentlemen, this concludes today's call. Thank you all for joining, and you may now disconnect.

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