# UNITED STATES <br> SECURITIES AND EXCHANGE COMMISSION <br> <br> Washington, D.C. 20549 <br> <br> Washington, D.C. 20549 <br> $\because \because:$ <br> Centrus <br> $\therefore: \because \because$ Fueling the Future <br> FORM 10-Q 

® QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the quarterly period ended March 31, 2018
OR
$\square$ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
Commission file number 1-14287

## Centrus Energy Corp.

Delaware<br>52-2107911<br>(State of incorporation)<br>(I.R.S. Employer Identification No.)

## 6901 Rockledge Drive, Suite 800, Bethesda, Maryland 20817 <br> (301) 564-3200

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes $\boldsymbol{\boxtimes}$ No $\square$

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T ( $\$ 232.405$ of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes $\mathbb{\text { No }} \square$

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

| Large accelerated filer | $\square$ | Smaller reporting company | $\boxed{x}$ |
| :--- | :--- | :--- | :--- |
| Accelerated filer | $\square$ | Emerging growth company | $\square$ |

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).
Yes $\square$ No $\mathbb{\otimes}$
Indicate by check mark whether the registrant has filed all documents and reports required to be filed by Sections 12, 13 or $15(\mathrm{~d})$ of the Securities Exchange Act of 1934 subsequent to the distribution of securities under a plan confirmed by a court.

Yes $\mathbb{\text { ® }} \square$

As of May 1, 2018, there were $7,632,669$ shares of the registrant's Class A Common Stock, par value $\$ 0.10$ per share, and $1,406,082$ shares of the registrant's Class B Common Stock, par value $\$ 0.10$ per share, outstanding.

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## FORWARD-LOOKING STATEMENTS

This Quarterly Report on Form 10-Q, including Management's Discussion and Analysis of Financial Condition and Results of Operations in Part I, Item 2, contains "forward-looking statements" within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act") - that is, statements related to future events. In this context, forward-looking statements may address our expected future business and financial performance, and often contain words such as "expects", "anticipates", "intends", "plans", "believes", "will", "should", "could", "would" or "may" and other words of similar meaning. Forward-looking statements by their nature address matters that are, to different degrees, uncertain. For Centrus Energy Corp., particular risks and uncertainties that could cause our actual future results to differ materially from those expressed in our forward-looking statements include risks: related to our significant long-term liabilities, including material unfunded defined benefit pension plan obligations and postretirement health and life benefit obligations; risks relating to our outstanding $8.0 \%$ paid-in-kind ("PIK") toggle notes (the " $8 \%$ PIK Toggle Notes") maturing in September 2019, our $8.25 \%$ notes (the " $8.25 \%$ Notes") maturing in February 2027 and our Series B Senior Preferred Stock, including the potential termination of the guarantee by United States Enrichment Corporation of the 8\% PIK Toggle Notes; risks related to the use of our net operating losses ("NOLs") and net unrealized built-in losses ("NUBILs") to offset future taxable income and the use of the Rights Agreement (as defined herein) to prevent an "ownership change" as defined in Section 382 of the Internal Revenue Code of 1986, as amended (the "Code") and our ability to generate taxable income to utilize all or a portion of the NOLs and NUBILs prior to the expiration thereof; risks related to the limited trading markets in our securities; risks related to our ability to maintain the listing of our Class A Common Stock on the NYSE American LLC (the "NYSE American"); risks related to decisions made by our Class B stockholders regarding their investment in the Company based upon factors that are unrelated to the Company's performance; the continued impact of the March 2011 earthquake and tsunami in Japan on the nuclear industry and on our business, results of operations and prospects; the impact and potential extended duration of the current supply/demand imbalance in the market for lowenriched uranium ("LEU"); our dependence on others for deliveries of LEU including deliveries from the Russian government entity Joint Stock Company "TENEX" ("TENEX") under a commercial supply agreement with TENEX (the "Russian Supply Agreement"); risks related to our ability to sell the LEU we procure
pursuant to our purchase obligations under our supply agreements, including the Russian Supply Agreement; risks relating to our sales order book, including uncertainty concerning customer actions under current contracts and in future contracting due to market conditions and lack of current production capability; risks related to financial difficulties experienced by customers, including possible bankruptcies, insolvencies or any other inability to pay for our products or services; pricing trends and demand in the uranium and enrichment markets and their impact on our profitability; movement and timing of customer orders; risks related to the value of our intangible assets related to the sales order book and customer relationships; risks associated with our reliance on third-party suppliers to provide essential services to us; risks related to existing or new trade barriers and contract terms that limit our ability to deliver LEU to customers; risks related to actions that may be taken by the U.S. government, the Russian government or other governments that could affect our ability or the ability of our sources of supply to perform under their contract obligations to us, including the imposition of sanctions, restrictions or other requirements; the impact of government regulation including by the U.S. Department of Energy and the United States Nuclear Regulatory Commission; uncertainty regarding our ability to commercially deploy competitive enrichment technology; risks and uncertainties regarding funding for the American Centrifuge project and our ability to perform under our agreement with UT-Battelle, LLC ("UT-Battelle"), the management and operating contractor for Oak Ridge National Laboratory ("ORNL"), for continued research and development of the American Centrifuge technology; the potential for further demobilization or termination of the American Centrifuge project; risks related to the current demobilization of portions of the American Centrifuge project, including risks that the schedule could be delayed and costs could be higher than expected; failures or security breaches of our information technology systems; potential strategic transactions, which could be difficult to implement, disrupt our business or change our business profile significantly; the outcome of legal proceedings and other contingencies (including lawsuits and government investigations or audits); the competitive environment for our products and services; changes in the nuclear energy industry; the impact of financial market conditions on our business, liquidity, prospects, pension assets and insurance facilities; revenue and operating results can fluctuate significantly from quarter to quarter, and in some cases, year to year; and other risks and uncertainties discussed in this and our other filings with the Securities and Exchange Commission, including our Annual Report on Form 10-K for the year ended December 31, 2017.

Readers are urged to carefully review and consider the various disclosures made in this report and in our other filings with the Securities and Exchange Commission that attempt to advise interested parties of the risks and factors that may affect our business. We do not undertake to update our forward-looking statements to reflect events or circumstances that may arise after the date of this Quarterly Report on Form 10-Q, except as required by law.

## CENTRUS ENERGY CORP.

## CONDENSED CONSOLIDATED BALANCE SHEETS

## (Unaudited; in millions, except share and per share data)

|  | $\begin{gathered} \text { March 31, } \\ 2018 \end{gathered}$ |  | $\begin{gathered} \text { December 31, } \\ 2017 \end{gathered}$ |  |
| :---: | :---: | :---: | :---: | :---: |
| ASSETS |  |  |  |  |
| Current assets |  |  |  |  |
| Cash and cash equivalents | \$ | 153.3 | \$ | 208.8 |
| Accounts receivable |  | 15.0 |  | 60.2 |
| Inventories |  | 164.0 |  | 153.1 |
| Deferred costs associated with deferred revenue |  | 119.6 |  | 122.3 |
| Other current assets |  | 22.4 |  | 22.5 |
| Total current assets |  | 474.3 |  | 566.9 |
| Property, plant and equipment, net of accumulated depreciation of \$2.3 as of March 31, 2018 and $\$ 1.9$ as of December 31, 2017 |  | 4.6 |  | 4.9 |
| Deposits for financial assurance |  | 19.8 |  | 19.7 |
| Intangible assets, net |  | 81.3 |  | 82.7 |
| Other long-term assets |  | 0.9 |  | 1.1 |
| Total assets | \$ | 580.9 | \$ | 675.3 |
|  |  |  |  |  |
| LIABILITIES AND STOCKHOLDERS' DEFICIT |  |  |  |  |
| Current liabilities |  |  |  |  |
| Accounts payable and accrued liabilities | \$ | 57.2 | \$ | 54.3 |
| Payables under SWU purchase agreements |  | 23.5 |  | 79.4 |
| Inventories owed to customers and suppliers |  | 93.8 |  | 77.9 |
| Deferred revenue and advances from customers |  | 170.2 |  | 191.8 |
| Total current liabilities |  | 344.7 |  | 403.4 |
| Long-term debt |  | 155.3 |  | 157.5 |
| Postretirement health and life benefit obligations |  | 153.1 |  | 154.2 |
| Pension benefit liabilities |  | 159.2 |  | 161.6 |
| Other long-term liabilities |  | 12.3 |  | 17.5 |
| Total liabilities |  | 824.6 |  | 894.2 |
| Commitments and contingencies (Note 11) |  |  |  |  |
| Stockholders' deficit |  |  |  |  |
| Preferred stock, par value \$1.00 per share, 20,000,000 shares authorized |  |  |  |  |
| Series A Participating Cumulative Preferred Stock, none issued |  | - |  | - |
| Series B Senior Preferred Stock, $7.5 \%$ cumulative, 104,574 shares issued and outstanding and an aggregate liquidation preference of $\$ 113.5$ as of March 31, 2018 and $\$ 111.5$ as of December 31, 2017 |  | 4.6 |  | 4.6 |
| Class A Common Stock, par value $\$ 0.10$ per share, $70,000,000$ shares authorized, $7,632,669$ shares issued and outstanding as of March 31, 2018 and December 31, 2017 |  | 0.8 |  | 0.8 |
| Class B Common Stock, par value $\$ 0.10$ per share, $30,000,000$ shares authorized, $1,406,082$ shares issued and outstanding as of March 31, 2018 and December 31, 2017 |  | 0.1 |  | 0.1 |
| Excess of capital over par value |  | 60.1 |  | 60.0 |
| Accumulated deficit |  | (309.4) |  | (284.5) |
| Accumulated other comprehensive income, net of tax |  | 0.1 |  | 0.1 |
| Total stockholders' deficit |  | (243.7) |  | (218.9) |
| Total liabilities and stockholders' deficit | \$ | 580.9 | \$ | 675.3 |

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

## CENTRUS ENERGY CORP.

## CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS

## (Unaudited; in millions, except share and per share data)

|  | Three Months Ended March 31, |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2018 |  | 2017 |  |
| Revenue: |  |  |  |  |
| Separative work units | \$ | 17.7 | \$ | 0.8 |
| Uranium |  | 3.6 |  | - |
| Contract services |  | 14.4 |  | 6.4 |
| Total revenue |  | 35.7 |  | 7.2 |
| Cost of Sales: |  |  |  |  |
| Separative work units and uranium |  | 34.8 |  | 2.7 |
| Contract services |  | 6.5 |  | 7.4 |
| Total cost of sales |  | 41.3 |  | 10.1 |
| Gross loss |  | (5.6) |  | (2.9) |
| Advanced technology license and decommissioning costs |  | 7.7 |  | 6.1 |
| Selling, general and administrative |  | 11.2 |  | 12.4 |
| Amortization of intangible assets |  | 1.3 |  | 1.2 |
| Special charges for workforce reductions and advisory costs |  | 0.6 |  | 2.4 |
| Gains on sales of assets |  | (0.1) |  | (1.0) |
| Operating loss |  | (26.3) |  | (24.0) |
| Gain on early extinguishment of debt |  | - |  | (33.6) |
| Nonoperating components of net periodic benefit expense (income) |  | (1.6) |  | (0.4) |
| Interest expense |  | 1.0 |  | 2.9 |
| Investment income |  | (0.6) |  | (0.3) |
| Income (loss) before income taxes |  | (25.1) |  | 7.4 |
| Income tax benefit |  | (0.1) |  | (0.2) |
| Net income (loss) |  | (25.0) |  | 7.6 |
| Preferred stock dividends - undeclared and cumulative |  | 2.0 |  | 1.0 |
| Net income (loss) allocable to common stockholders | \$ | (27.0) | \$ | 6.6 |
|  |  |  |  |  |
| Net income (loss) per common share: |  |  |  |  |
| - Basic | \$ | (2.97) | \$ | 0.73 |
| Diluted | \$ | (2.97) | \$ | 0.72 |
| Average number of common shares outstanding (in thousands): |  |  |  |  |
| - Basic |  | 9,103 |  | 9,063 |
| Diluted |  | 9,103 |  | 9,174 |

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

## CENTRUS ENERGY CORP.

## CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

## (Unaudited; in millions)

|  | Three Months Ended March 31, |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2018 |  | 2017 |  |
| Net income (loss) | \$ | (25.0) | \$ | 7.6 |
| Other comprehensive loss, before tax (Note 12): |  |  |  |  |
| Amortization of prior service credits, net |  | - |  | (0.1) |
| Other comprehensive loss, before tax |  | - |  | (0.1) |
| Income tax benefit related to items of other comprehensive income |  | - |  | - |
| Other comprehensive loss, net of tax benefit |  | - |  | (0.1) |
| Comprehensive income (loss) | \$ | (25.0) | \$ | 7.5 |

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

## CENTRUS ENERGY CORP

## CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS <br> (Unaudited; in millions)

|  | Three Months Ended March 31, |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2018 |  | 2017 |  |
| Operating Activities |  |  |  |  |
| Net income (loss) | \$ | (25.0) | \$ | 7.6 |
| Adjustments to reconcile net income (loss) to cash used in operating activities: |  |  |  |  |
| Depreciation and amortization |  | 1.6 |  | 1.4 |
| PIK interest on paid-in-kind toggle notes |  | 0.4 |  | 0.8 |
| Gain on early extinguishment of debt |  | - |  | (33.6) |
| Gain on sales of assets |  | (0.1) |  | (1.0) |
| Changes in operating assets and liabilities: |  |  |  |  |
| Accounts receivable |  | 45.2 |  | 23.0 |
| Inventories, net |  | 5.0 |  | (0.9) |
| Payables under SWU purchase agreements |  | (55.9) |  | (59.5) |
| Deferred revenue, net of deferred costs |  | (18.9) |  | - |
| Accounts payable and other liabilities |  | (5.4) |  | (9.4) |
| Other, net |  | 0.8 |  | (1.4) |
| Cash used in operating activities |  | (52.3) |  | (73.0) |


| Investing Activities |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Capital expenditures |  | (0.1) |  | - |
| Proceeds from sales of assets |  | 0.1 |  | 0.6 |
| Cash provided by investing activities |  | - |  | 0.6 |
|  |  |  |  |  |
| Financing Activities |  |  |  |  |
| Payment of interest classified as debt |  | (3.0) |  | - |
| Repurchase of debt |  | - |  | (27.6) |
| Payment of securities transaction costs |  | - |  | (9.0) |
| Cash used in financing activities |  | (3.0) |  | (36.6) |
|  |  |  |  |  |
| Decrease in cash, cash equivalents and restricted cash |  | (55.3) |  | (109.0) |
| Cash, cash equivalents and restricted cash at beginning of period ${ }^{(1)}$ |  | 244.8 |  | 296.7 |
| Cash, cash equivalents and restricted cash at end of period ${ }^{(1)}$ | \$ | 189.5 | \$ | 187.7 |
|  |  |  |  |  |
| Supplemental cash flow information: |  |  |  |  |
| Interest paid in cash | \$ | 0.4 | \$ | 0.4 |
| Non-cash activities: |  |  |  |  |
| Conversion of interest payable-in-kind to long-term debt | \$ | 0.9 | \$ | 0.8 |
| Exchange of debt for Series B preferred stock | \$ | - | \$ | 4.6 |

[^0]The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

## CENTRUS ENERGY CORP.

CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' DEFICIT

## (Unaudited; in millions, except per share data)

|  | Preferred Stock, Series B |  | Common Stock, Class A, Par Value $\$ .10$ per Share |  | Common Stock, Class B, Par Value \$. 10 per Share |  | Excess of Capital Over Par Value |  | Accumulated Deficit |  | Accumulated Other Comprehensive Income |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Balance at December 31, 2016 | \$ | - | \$ | 0.8 | \$ | 0.1 | \$ | 59.5 | \$ | (296.7) | \$ | 0.2 | \$ | (236.1) |
| Net income |  | - |  | - |  | - |  | - |  | 7.6 |  | - |  | 7.6 |
| Issuance of preferred stock |  | 4.6 |  | - |  | - |  | - |  | - |  | - |  | 4.6 |
| Other comprehensive loss, net of tax benefit (Note 12) |  | - |  | - |  | - |  | - |  | - |  | (0.1) |  | (0.1) |
| Restricted stock units and stock options issued, net of amortization |  | - |  | - |  | - |  | 0.1 |  | - |  | - |  | 0.1 |
| Balance at March 31, 2017 | \$ | 4.6 | \$ | 0.8 | \$ | 0.1 | \$ | 59.6 | \$ | (289.1) | \$ | 0.1 | \$ | (223.9) |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Balance at December 31, 2017 | \$ | 4.6 | \$ | 0.8 | \$ | 0.1 | \$ | 60.0 | \$ | (284.5) | \$ | 0.1 | \$ | (218.9) |
| Adoption of ASC 606 as of January 1, 2018 (Note 1) |  | - |  | - |  | - |  | - |  | 0.1 |  | - |  | 0.1 |
| Net loss |  | - |  | - |  | - |  | - |  | (25.0) |  | - |  | (25.0) |
| Other comprehensive loss, net of tax benefit (Note 12) |  | - |  | - |  | - |  | - |  | - |  | - |  | - |
| Restricted stock units and stock options issued, net of amortization |  | - |  | - |  | - |  | 0.1 |  | - |  | - |  | 0.1 |
| Balance at March 31, 2018 | \$ | 4.6 | \$ | 0.8 | \$ | 0.1 | \$ | 60.1 | \$ | (309.4) | \$ | 0.1 | \$ | (243.7) |

The accompanying notes are an integral part of these unaudited condensed consolidated financial statements.

## CENTRUS ENERGY CORP. <br> NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)

## 1. BASIS OF PRESENTATION

The unaudited condensed consolidated financial statements of Centrus Energy Corp. ("Centrus" or the "Company"), which include the accounts of the Company, its principal subsidiary United States Enrichment Corporation ("Enrichment Corp.") and its other subsidiaries, as of March 31, 2018, and for the three months ended March 31, 2018 and 2017, have been prepared pursuant to the rules and regulations of the Securities and Exchange Commission ("SEC"). The condensed consolidated balance sheet as of December 31, 2017, was derived from audited consolidated financial statements, but does not include all disclosures required by generally accepted accounting principles in the United States ("GAAP"). In the opinion of management, the unaudited condensed consolidated financial statements reflect all adjustments, including normal recurring adjustments, necessary for a fair statement of the financial results for the interim period. Certain prior year amounts have been reclassified for consistency with the current year presentation. Certain information and notes normally included in financial statements prepared in accordance with GAAP have been omitted pursuant to such rules and regulations. All material intercompany transactions have been eliminated.

Operating results for the three months ended March 31, 2018, are not necessarily indicative of the results that may be expected for the year ending December 31, 2018. The unaudited condensed consolidated financial statements should be read in conjunction with the consolidated financial statements and related notes and Management's Discussion and Analysis of Financial Condition and Results of Operations included in the Annual Report on Form 10-K for the year ended December 31, 2017.

## New Accounting Standards

## Recently Adopted Accounting Standards

In 2014, the Financial Accounting Standards Board (the "FASB") issued Accounting Standards Update ("ASU") 2014-09, Revenue from Contracts with Customers, which requires revenue to be recognized when a customer obtains control of promised goods and services at an amount that reflects the consideration the Company expects to receive in exchange for those goods and services. In addition, ASU 2014-09 and subsequent amendments, collectively known as Accounting Standards Codification ("ASC") 606 ("ASC $606 "$ ) require certain additional disclosures regarding the nature, amount, timing, and uncertainty of revenues and cash flows arising from contracts with customers.

The Company adopted ASC 606 on January 1, 2018, using the modified retrospective method. The new standard was applied to contracts that were not completed as of the adoption date. The Company recognized the cumulative effect of initially applying ASC 606 of $\$ 0.1$ million as an adjustment to the opening balance of accumulated deficit. The comparative information has not been restated and continues to be presented according to accounting standards in effect for those periods. Refer to Note 2, Revenue Recognition and Contracts with Customers, for additional information.

The following table summarizes the cumulative effect of the changes to the Company's condensed consolidated balance sheet as of January 1, 2018, from the adoption of ASC 606 (in millions):

|  | $\begin{aligned} & \text { Balance at December 31, } \\ & 2017 \end{aligned}$ |  | Adjustment for ASC 606 |  | Balance at <br> January 1, 2018 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assets: |  |  |  |  |  |  |
| Unbilled contract revenue | \$ | - | \$ | 0.1 | \$ | 0.1 |
| Stockholders' Deficit: |  |  |  |  |  |  |
| Accumulated Deficit |  | (284.5) |  | 0.1 |  | (284.4) |

The following table summarizes the impact of adopting ASC 606 on revenue for the three months ended March 31, 2018 (in millions):

|  | Three Months Ended <br> March 31, 2018 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | As Reported |  | Under Previous Accounting |  | Effect of Adoption Higher (Lower) |  |
| Revenue - Contract services | \$ | 14.4 | \$ | 14.8 | \$ | (0.4) |
| Net income (loss) | \$ | (25.0) | \$ | (24.6) | \$ | (0.4) |

The effect of adoption includes the opening balance adjustment of $\$ 0.1$ million and $\$ 0.3$ million of amounts billed as of March 31 , 2018, that are included in Deferred Revenue and Advances with Customers pending transfer of control of contractual services to the customer.

In March 2017, the FASB issued ASU 2017-07, Compensation-Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost. ASU 2017-07 requires changes to the presentation of the components of net periodic benefit cost on the statement of operations by requiring service cost to be presented with other employee compensation costs and other components of net periodic benefit cost to be presented outside of any subtotal of operating income. The Company adopted this standard on January 1, 2018, on a retrospective basis for all periods presented, and certain prior period amounts have been recast to conform with the current presentation as follows (in millions):

|  | Three Months Ended March 31, 2017 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | As Previously Reported |  | Adjustments |  | Current Presentation |  |
| Cost of sales - separative work units and uranium | \$ | 2.3 | \$ | 0.4 | \$ | 2.7 |
| Nonoperating components of net periodic benefit expense (income) |  | - |  | (0.4) |  | (0.4) |

Refer to Note 9, Pension and Postretirement Benefits for additional information.
In August 2016, the FASB issued ASU 2016-15, Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments. ASU 2016-15 addresses the presentation and classification of certain cash receipts and cash payments in the statement of cash flows. It is intended to reduce diversity in practice by providing guidance on eight specific cash flow issues. ASU 2016-15 became effective for the Company on January 1, 2018. Upon adoption, the Company reclassified $\$ 9.0$ million of transaction costs incurred in the first quarter of 2017 related to the note exchange (see Note 7, Debt) in the statement of cash flows as follows (in millions):

|  | Three Months Ended March 31, 2017 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | As PreviouslyReported |  | Adjustments |  | Current Presentation |  |
| Cash used in operating activities | \$ | (82.0) | \$ | 9.0 | \$ | (73.0) |
| Cash used in financing activities |  | (27.6) |  | (9.0) |  | (36.6) |

In November 2016, the FASB issued ASU 2016-18, Statement of Cash Flows (Topic 230): Restricted Cash. ASU 2016-18 requires that the statement of cash flows explain the change during the period in the total of cash, cash equivalents, and amounts generally described as restricted cash or restricted cash equivalents. ASU 2016-18 is to be applied retrospectively for each period presented. The Company adopted the new standard on January 1, 2018. Upon adoption, the Company added its restricted cash balances to the consolidated statement of cash flows, and the prior period amounts have been recast to conform with the current presentation.

In October 2016, the FASB issued ASU 2016-16, Income Taxes (Topic 740): Intra-Entity Transfers of Assets Other Than Inventory, requiring an entity to recognize the income tax consequences of an intra-entity transfer of an asset other than inventory when the transfer occurs. Consequently, an entity is required to recognize the current and deferred income taxes resulting from an intra-entity transfer of assets other than inventory when the transfer occurs. ASU 2016-16 is effective for the Company beginning in 2018, including interim reporting periods. In applying the new standard on a modified retrospective basis, there is no material cumulativeeffect adjustment to retained earnings or net assets in its consolidated balance sheet as of January 1, 2018 due to the Company's full valuation allowance against net deferred assets. In addition, the adoption did not have an impact to the Company's net income (loss) for the quarter ended March 31, 2018.

## Accounting Standards Effective in Future Periods

In February 2016, the FASB issued ASU 2016-02, Leases (Topic 842), which requires lessees to recognize a right-of-use asset and lease liability on the balance sheet for all leases with terms longer than 12 months. Leases will be classified as either finance or operating, with classification affecting expense recognition in the statement of operations. ASU 2016-02 will become effective for the Company beginning in the first quarter of 2019 , with early adoption permitted, and is to be applied using a modified retrospective approach. The Company is evaluating the effect that the provisions of ASU 2016-02 will have on its condensed consolidated financial statements.

## Significant Accounting Policies

The accounting policies of the Company are set forth in Note 1 to the Consolidated Financial Statements contained in the Company's 2017 Annual Report on Form 10-K. Updates to those policies as a result of the adoption of ASC 606 have been included in Note 2, Revenue Recognition and Contracts with Customers.

## 2. REVENUE RECOGNITION AND CONTRACTS WITH CUSTOMERS

On January 1, 2018, the Company adopted ASC 606 using the modified retrospective method as applied to customer contracts that were not completed as of the adoption date. As a result, financial information for reporting periods beginning on or after January 1 , 2018, are presented under ASC 606, while comparative financial information has not been adjusted and continues to be reported in accordance with the Company's historical accounting policy for revenue recognition prior to the adoption of ASC 606. There was no material impact of adopting ASC 606 for sales under the LEU Segment. For sales under the Contract Services Segment, revenue is now recognized using a cost-to-cost method to measure the transfer of control of contract services to the customer.

## Revenue Recognition

Revenue for product and service sales is recognized when or as the Company transfers control of the promised products or services to the customer. Revenue is measured at the transaction price which is based on the amount of consideration that the Company expects to receive in exchange for transferring the promised goods or services to the customer. The transaction price will include estimates of variable consideration to the extent it is probable that a significant reversal of revenue recognized will not occur.

Revenue for the Company's LEU Segment is derived from sales of the separative work units ("SWU") component of low enriched uranium ("LEU"), from sales of both the SWU and uranium components of LEU, and from sales of uranium. Contracts with customers are primarily long-term, fixed-commitment contracts under which its customers are obligated to purchase a specified quantity of the SWU component of LEU or the SWU and uranium components of LEU. The Company's contracts for natural uranium are generally shorter-term, fixed- commitment contracts.

Revenue is recognized at the time the customer obtains control of the LEU or uranium. Customers generally obtain control of LEU at fuel fabricators. Centrus ships LEU to nuclear fuel fabricators for scheduled or anticipated orders from utility customers. Based on customer orders, Centrus arranges for the transfer of title of LEU from Centrus to the customer for the specified quantity of LEU at the fuel fabricator. Revenue is recognized when control of LEU is transferred to the customer at the fuel fabricator. Each such delivery to a customer is accounted for as a distinct performance obligation under a contract, and a contract may call for multiple deliveries over a number of periods. The contract's transaction price is allocated to each performance obligation based on the observable standalone selling price of each distinct delivery of SWU or uranium.

Utility customers in general have the option to defer physical receipt of LEU or uranium purchased from the Company beyond the contractual sale period. In such cases, title to LEU or uranium is transferred to the customer and a performance obligation for Centrus is created and a receivable is recorded. Cash is collected for the receivable under normal credit terms. The performance obligation is represented as Deferred Revenue on the balance sheet and the customer-titled product is classified as Deferred Costs Associated with Deferred Revenue. Risk of loss remains with Centrus until physical delivery occurs. The recognition of revenue and related cost of sales occurs at the time physical delivery occurs and control and risk of loss of the product transfer to the customer, which may occur beyond one year. The timing of physical delivery, subject to notice period requirements, is at the option of the customer. As such, deferred costs and deferred revenue are classified within current assets and current liabilities, respectively.

On occasion, Centrus will accept payment in the form of uranium. Revenue from the sale of SWU under such contracts is recognized at the time control of the LEU is transferred to the customer and is based on the fair value of the uranium transferred.

Amounts billed to customers for handling costs are included in sales. Handling costs are accounted for as a fulfillment cost and are included in cost of sales. The Company does not have shipping costs associated with outbound freight after control over a product has transferred to a customer. The Company's contracts with customers do not provide for significant payment terms or financing components.

Revenue for the Contract Services Segment, principally representing engineering and testing activities performed by the Company, is recognized over the contractual period as services are rendered. The contract services segment consists primarily of revenue and cost of sales for engineering and testing work Centrus performs under an agreement with UT-Battelle, LLC ("UT-Battelle"), the management and operating contractor for Oak Ridge National Laboratory ("ORNL"). The contract services segment also includes limited services provided by Centrus to the U.S. Department of Energy ("DOE") and its contractors at the Portsmouth site related to facilities the Company leases from DOE. In the three months ended March 31, 2018, revenue for the contract services segment included $\$ 9.5$ million under a settlement agreement with DOE and the United States government. Refer below to Contract Balances for additional details.

The Company recognizes revenue over time as it performs on these contracts because of the continuous transfer of control to the customer. With control transferring over time, revenue is recognized based on the extent of progress towards completion of the performance obligation. A contract may contain one or more performance obligations. Two or more promises to transfer goods or services to a customer may be considered a single performance obligation if the goods or services are highly interdependent or highly interrelated such that utility of the promised goods or services to the customer includes integration services provided by the Company.

The Company principally uses the cost-to-cost input method of progress for its contracts because it best depicts the transfer of control to the customer that occurs as the Company incurs costs. Under the cost-to-cost method, the extent of progress towards completion is measured based on the proportion of direct costs incurred to date to the total estimated direct costs at completion of the performance obligation. Revenues are recorded proportionally as costs are incurred. If transaction prices are not stated in the contract for each performance obligation, contractual prices are allocated to performance obligations based on estimated relative standalone selling prices of the promised services.

The Company has applied the practical expedient in paragraph ASC 606 and does not provide the value of remaining performance obligations under service contracts having original expected terms of one year or less.

The timing of revenue recognition may differ from the timing of invoicing to customers. Progress on satisfying performance obligations under contracts with customers and the related billings and cash collections are recorded on the consolidated balance sheet as contract assets or contract liabilities. Contract balances are classified as assets or liabilities on a contract-by-contract basis at the end of each reporting period.

Unbilled receivables (contract assets) are included in Accounts Receivable and arise when the timing of cash collected from customers differs from the timing of revenue recognition, such as when contract provisions require specific milestones to be met before a customer can be billed. Those assets are recognized when the revenue associated with the contract is recognized prior to billing and derecognized when billed in accordance with the terms of the contract. To the extent billings to the customer precede the recognition of contract services revenue, the Company recognizes a liability included in Deferred Revenue and Advances from Customers on the consolidated balance sheet.

## Disaggregation of Revenue

The following table presents revenue from SWU and uranium sales disaggregated by geographical region based on the billing addresses of customers (in millions):

|  | Three Months Ended March 31, |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2018 |  | 2017 |  |
| United States | \$ | 21.1 | \$ | 0.2 |
| Asia |  | 0.1 |  | 0.6 |
| Other |  | 0.1 |  | - |
| Revenue - SWU and uranium | \$ | 21.3 | \$ | 0.8 |

Refer to Note 13, Segment Information, for disaggregation of revenue by segment. Disaggregation by end-market is provided in Note 13 and the condensed consolidated statement of operations. SWU and uranium sales are made to electric utility customers. Contract services revenue results primarily from the UT-Battelle contract and, in the three months ended March 31, 2018, the settlement with DOE and the United States government. SWU and uranium revenue is recognized at point of sale and contract services revenue is generally recognized over time.

## Contract Balances

The following table represents changes in our contract assets and contract liabilities balances (in millions):

|  | March 31, 2018 |  | January 1, 2018 |  | Year-To-Date Change |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Contract assets |  |  |  |  |  |  |
| Accounts receivable: |  |  |  |  |  |  |
| Billed | \$ | 15.0 | \$ | 60.2 | \$ | (45.2) |
| Unbilled contract revenue |  | - |  | 0.1 |  | (0.1) |
| Accounts receivable | \$ | 15.0 | \$ | 60.3 | \$ | (45.3) |
|  |  |  |  |  |  |  |
| Deferred costs associated with deferred revenue | \$ | 119.6 | \$ | 122.3 | \$ | (2.7) |
|  |  |  |  |  |  |  |
| Contract liabilities |  |  |  |  |  |  |
| Deferred revenue and advances from customers: |  |  |  |  |  |  |
| Deferred revenue | \$ | 169.9 | \$ | 172.5 | \$ | (2.6) |
| Advances from customers |  | 0.3 |  | 19.3 |  | (19.0) |
| Deferred revenue and advances from customers | \$ | 170.2 | \$ | 191.8 | \$ | (21.6) |

During the three months ended March 31, 2018 and 2017, the Company recognized revenue of $\$ 2.7$ million and $\$ 0.2$ million, respectively, that was included in deferred revenue at the beginning of the periods.

On January 11, 2018, the Company entered into a settlement agreement with DOE and the United States government regarding breach of contract claims relating to work performed by the Company under contracts with DOE and subcontracts with DOE contractors. DOE agreed to settle all claims raised as part of and subsequent to the litigation for a total of $\$ 24.0$ million and provide a complete close out of all such contracts and subcontracts settled under the settlement agreement without any further audit or review of the Company's costs or incurred cost submissions, except with respect to certain claims for pension and postretirement benefits. Prior to the settlement, the Company had a receivables balance related to the claims being settled of $\$ 14.5$ million. In the three months ended March 31, 2018, the Company (a) received $\$ 4.7$ million from the United States government, (b) applied approximately $\$ 19.3$ million of advances from the United States government received in prior years against the receivables balance, and (c) recorded additional revenue of $\$ 9.5$ million.

Centrus and DOE have yet to fully settle the Company's claims for reimbursements for certain pension and postretirement benefits costs related to past contract work performed for DOE. There is the potential for additional revenue to be recognized for this work pending the outcome of legal proceedings related to the Company's claims for payment and the potential release of previously established valuation allowances on receivables. As a result of the application of fresh start accounting following the Company's emergence from Chapter 11 bankruptcy on September 30, 2014, the receivables related to the Company's claims for payment are carried at fair value as of September 30, 2014, which is net of the valuation allowances.

The SWU component of LEU is typically bought and sold under long-term contracts with deliveries over several years. The Company's order book of sales under contract ("order book") extends for more than a decade. As of March 31, 2018, and December 31,2017 , the order book was $\$ 1.3$ billion. As previously disclosed, some long-term contracts in the Company's order book were established with milestones related to the deployment of the American Centrifuge Plant ("ACP") in Piketon, Ohio, that permit termination with respect to portions of the contract under limited circumstances. Further, some of the Company's customers are facing financial difficulties and may seek modifications to their contracts or seek bankruptcy protection. One of the Company's customers, as a result of financial difficulties, has filed for bankruptcy court protection. The Company estimates that as of March 31, 2018, approximately $14 \%$ of the order book remains at risk due to milestones related to ACP deployment or due to customer financial conditions. Any cancellation or modification of one or more contracts or orders could negatively impact the Company's future results of operations.

Most of the Company's contracts provide for fixed purchases of SWU during a given year. The Company's estimate of the aggregate dollar amount of future SWU and uranium sales is partially based on customers' estimates of the timing and size of their fuel requirements and other assumptions that are subject to change. For example, depending on the terms of specific contracts, the customer may be able to increase or decrease the quantity delivered within an agreed range. The Company's order book estimate is also based on the Company's estimates of selling prices, which are subject to change. For example, depending on the terms of specific contracts, prices may be adjusted based on escalation using a general inflation index, published SWU price indicators prevailing at the time of delivery, and other factors, all of which are variable. The Company uses external composite forecasts of future market prices and inflation rates in its pricing estimates. Refer to Item 1A, Risk Factors, of the Company's 2017 Annual Report on Form 10-K for a discussion of risks related to the Company's order book.

## 3. SPECIAL CHARGES

## Evolving Business Needs

Evolving business needs have resulted in workforce reductions since 2013. In the three months ended March 31, 2018 and 2017, special charges included estimated employee termination benefits of $\$ 0.7$ million and $\$ 0.8$ million, respectively. Centrus expects to make payments primarily in the second quarter of 2018 related to the $\$ 1.1$ million balance payable at March 31, 2018. In the three months ended March 31, 2018 and 2017, the Company incurred advisory costs of $\$ 0.1$ million and $\$ 1.6$ million, respectively, related to updating its information technology systems.

## Piketon Demonstration Facility

In February 2016, Centrus completed a successful three-year demonstration of American Centrifuge technology at its facility in Piketon, Ohio. The demonstration effort was primarily funded by the U.S. government. As a result of reduced program funding effective October 2015, Centrus incurred a special charge in 2015 for estimated employee termination benefits. Based on current expectations of required employee levels, $\$ 0.4$ million of the remaining $\$ 3.8$ million balance as of March 31,2018 , is classified as a current liability in the condensed consolidated balance sheet and the remaining $\$ 3.4$ million is classified as a long-term liability and is expected to be paid in 2019.

A summary of termination benefit activity and related liabilities follows (in millions):

|  | LiabilityDecember 31,2017 |  | Three Months Ended March 31, 2018 |  |  |  | Liability <br> March 31, 2018 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Charges for Termination Benefits |  | Paid/Settled |  |  |  |
| Workforce reductions: |  |  |  |  |  |  |  |  |
| Evolving business needs | \$ | 0.8 | \$ | 0.7 | \$ | (0.4) | \$ | 1.1 |
| Piketon demonstration facility |  | 5.7 |  | - |  | (1.9) |  | 3.8 |
|  | \$ | 6.5 | \$ | 0.7 | \$ | (2.3) | \$ | 4.9 |

## 4. CASH, CASH EQUIVALENTS AND RESTRICTED CASH

The following table summarizes the Company's cash, cash equivalents and restricted cash as presented on the unaudited condensed consolidated balance sheet to amounts on the condensed consolidated statement of cash flows (in millions):

|  | March 31, 2018 |  | December 31, 2017 |  |
| :--- | ---: | ---: | ---: | ---: |
|  |  | 153.3 | $\$$ | 208.8 |
| Cash and cash equivalents | $\$$ | 16.4 |  | 16.3 |
| Restricted cash included in other current assets | 19.8 |  | 19.7 |  |
| Restricted cash included in other long-term assets | $\underline{\mathbf{\$}}$ | $\mathbf{1 8 9 . 5}$ | $\mathbf{\$}$ | $\mathbf{2 4 4 . 8}$ |
| Total cash, cash equivalents and restricted cash |  |  |  |  |

The following provides additional detail regarding the Company's restricted cash (in millions):

|  | March 31, 2018 |  | December 31, 2017 |  |
| :---: | :---: | :---: | :---: | :---: |
| Current assets |  |  |  |  |
| Deposits for surety bonds - NRC | \$ | 16.2 | \$ | 16.1 |
| Deposits for financial assurance - other |  | 0.2 |  | 0.2 |
| Included in other current assets | \$ | 16.4 | \$ | 16.3 |
| Long-term assets |  |  |  |  |
| Deposits for surety bonds - DOE | \$ | 13.6 | \$ | 13.5 |
| Deposits for financial assurance - workers compensation |  | 5.9 |  | 5.9 |
| Deposits for financial assurance - other |  | 0.3 |  | 0.3 |
| Deposits for financial assurance | \$ | 19.8 | \$ | 19.7 |

## Piketon Facility Obligations and Surety Bonds

American Centrifuge expenses that are outside of the Company's contract with UT-Battelle are included in Advanced Technology License and Decommissioning Costs, including ongoing costs for work related to the termination of the license from the U.S. Nuclear Regulatory Commission ("NRC") and the lease with DOE for the Piketon facility. Centrus commenced with the decontamination and decommissioning ("D\&D") of the Piketon facility in accordance with NRC requirements in 2016. Most of the D\&D work has been completed as of March 31, 2018. The estimated fair value of the remaining costs to complete the D\&D work, included in Accounts Payable and Accrued Liabilities on the condensed consolidated balance sheet, is $\$ 1.0$ million as of March 31, 2018, and December 31, 2017.

Centrus has previously provided financial assurance to the NRC for the D\&D work in the form of surety bonds that are fully cash collateralized by Centrus for $\$ 16.2$ million. Centrus expects to receive cash when surety bonds are reduced and/or cancelled as the Company fulfills its D\&D obligations and the NRC license for the test facility is terminated.

Centrus leases the Piketon facility from DOE. At the conclusion of the lease on June 30, 2019, without mutual agreement between Centrus and DOE regarding other possible uses for the facility, Centrus is obligated to return the facility to DOE in a condition that meets NRC requirements and in the same condition as the facility was in when it was leased to Centrus (other than due to normal wear and tear). Centrus must remove all Company-owned capital improvements at the Piketon facility, unless otherwise consented to by DOE, by the conclusion of the lease term. The estimated cost for these lease termination obligations, included in Accounts Payable and Accrued Liabilities on the condensed consolidated balance sheet, is $\$ 0.8$ million as of March 31, 2018 and December 31, 2017.

Centrus has previously provided financial assurance to DOE for the lease obligations in the form of surety bonds that are fully cash collateralized by Centrus for $\$ 13.6$ million. Centrus expects to receive cash when surety bonds are reduced and/or cancelled as the Company fulfills its lease termination obligations.

## Financial Assurance for Workers' Compensation

The Company has provided financial assurance to states in which it was previously self-insured for workers' compensation in accordance with the state requirements in the form of a surety bond and a letter of credit that are fully cash collateralized by Centrus for $\$ 5.9$ million. The surety bond and letter of credit will be cancelled and the Company expects to receive cash when each state determines the Company has no further workers' compensation obligations.

## 5. INVENTORIES

Centrus holds uranium at licensed locations in the form of natural uranium and as the uranium component of LEU. Centrus also holds SWU as the SWU component of LEU at licensed locations (e.g., fabricators) to meet book transfer requests by customers. Fabricators process LEU into fuel for use in nuclear reactors. Components of inventories follow (in millions):

|  | March 31, 2018 |  |  |  |  |  | December 31, 2017 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Current Assets |  | Current Liabilities <br> (a) |  | Inventories, Net |  | Current <br> Assets |  | Current Liabilities (a) |  | Inventories, Net |  |
| Separative work units | \$ | 53.9 | \$ | 23.3 | \$ | 30.6 | \$ | 47.2 | \$ | 15.0 | \$ | 32.2 |
| Uranium |  | 110.1 |  | 70.5 |  | 39.6 |  | 105.9 |  | 62.9 |  | 43.0 |
|  | \$ | 164.0 | \$ | 93.8 | \$ | 70.2 | \$ | 153.1 | \$ | 77.9 | \$ | 75.2 |

(a) Inventories owed to customers and suppliers, included in current liabilities, include SWU and uranium inventories owed to fabricators.

## 6. INTANGIBLE ASSETS

Intangible assets originated from the Company's reorganization and application of fresh start accounting as of the date the Company emerged from bankruptcy, September 30, 2014, and reflect the conditions at that time. The intangible asset related to the sales order book is amortized as the order book existing at emergence is reduced, principally as a result of deliveries to customers. The intangible asset related to customer relationships is amortized using the straight-line method over the estimated average useful life of 15 years. Amortization expense is presented below gross profit on the condensed consolidated statements of operations.

|  | March 31, 2018 |  |  |  |  |  | December 31, 2017 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Gross Carrying Amount |  | Accumulated Amortization |  | (in millions) |  |  |  | Accumulated Amortization |  | Net Amount |  |
|  |  |  | Net Amount | Gross Carrying Amount |  |  |  |  |  |
| Sales order book | \$ | 54.6 |  |  | \$ | 26.1 | \$ | 28.5 | \$ | 54.6 | \$ | 25.9 | \$ | 28.7 |
| Customer relationships |  | 68.9 |  | 16.1 |  | 52.8 |  | 68.9 |  | 14.9 |  | 54.0 |
| Total | \$ | 123.5 | \$ | 42.2 | \$ | 81.3 | \$ | 123.5 | \$ | 40.8 | \$ | 82.7 |

## 7. DEBT

A summary of long-term debt follows (in millions):

|  | Maturity | $\begin{gathered} \text { March 31, } \\ 2018 \end{gathered}$ |  | December 31, 2017 |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 8.25\% Notes: | Feb. 2027 |  |  |  |  |
| Principal |  | \$ | 74.3 | \$ | 74.3 |
| Interest |  |  | 55.1 |  | 58.1 |
| 8.25\% Notes |  |  | 129.4 |  | 132.4 |
| 8\% PIK Toggle Notes | Sep. $2019{ }^{(a)}$ |  | 32.1 |  | 31.3 |
| Subtotal |  |  | 161.5 |  | 163.7 |
| Less deferred issuance costs |  |  | 0.1 |  | 0.1 |
| Total debt |  |  | 161.4 |  | 163.6 |
| Less current portion |  |  | 6.1 |  | 6.1 |
| Long-term debt |  | \$ | 155.3 | \$ | 157.5 |

(a) Maturity can be extended to September 2024 upon the satisfaction of certain funding conditions described in the Indenture.

## Note Exchange

On February 14, 2017, pursuant to an exchange offer and consent solicitation, Centrus exchanged $\$ 204.9$ million principal amount of the Company's $8 \%$ paid-in-kind ("PIK") toggle notes (the " $8 \%$ PIK Toggle Notes") for $\$ 74.3$ million principal amount of $8.25 \%$ notes due February 2027 (the " $8.25 \%$ Notes"), 104,574 shares of Series B Preferred Stock with a liquidation preference of $\$ 1,000$ per share, and $\$ 27.6$ million of cash. The exchange is accounted for as a troubled debt restructuring under ASC Subtopic 470-60, DebtTroubled Debt Restructurings by Debtors. The Company recognized the $8.25 \%$ Notes on the condensed consolidated balance sheet as the sum of the principal balance and all future interest payments and recognized a gain of $\$ 33.6$ million related to the note exchange for the quarter ended March 31, 2017, which is net of transaction costs of $\$ 9.0$ million and previously deferred issuance costs related to the $8 \%$ PIK Toggle Notes of $\$ 0.4$ million. Refer to Note 12, Stockholders' Equity for details related to the preferred stock.

Interest on the $8.25 \%$ Notes is payable semi-annually in arrears as of February 28 and August 31 based on a 360 -day year consisting of twelve 30 -day months. The $8.25 \%$ Notes mature on February 28, 2027. As described above, all future interest payment obligations on the $8.25 \%$ Notes are included in the carrying value of the $8.25 \%$ Notes. As a result, the Company's reported interest expense will be less than its contractual interest payments throughout the term of the $8.25 \%$ Notes. As of March 31, 2018, and December 31, 2017, $\$ 6.1$ million of interest is recorded as current and classified as Accounts Payable and Accrued Liabilities in the condensed consolidated balance sheet.

## 8\% PIK Toggle Notes

Interest on the $8 \%$ PIK Toggle Notes is payable semi-annually in arrears on March 31 and September 30 based on a 360 -day year consisting of twelve 30 -day months. The principal amount is increased by any payment of interest in the form of PIK payments. The Company has the option to pay up to $5.5 \%$ per annum of interest due on the $8 \%$ PIK Toggle Notes in the form of PIK payments. For the semi-annual interest periods ended March 31, 2018, the Company elected to pay interest in the form of PIK payments at $5.5 \%$ per annum. Financing costs for the issuance of the $8 \%$ PIK Toggle Notes were deferred and are being amortized on a straight-line basis, which approximates the effective interest method, over the life of the $8 \%$ PIK Toggle Notes. The $8 \%$ PIK Toggle Notes mature on September 20, 2019. However, the maturity date may be extended to September 30, 2024, upon the satisfaction of certain funding conditions.

Additional terms and conditions of the $8.25 \%$ Notes and the $8 \%$ PIK Toggle Notes are described in Note 9, Debt, of the audited consolidated financial statements in the Company's Annual Report on Form 10-K for the year ended December 31, 2017.

## 8. FAIR VALUE

Fair value is the price that would be received from selling an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. When determining the fair value of assets and liabilities, the following hierarchy is used in selecting inputs, with the highest priority given to Level 1, as these are the most transparent or reliable:

- Level 1 - quoted prices for identical instruments in active markets.
- Level 2 - quoted prices for similar instruments in active markets; quoted prices for identical or similar instruments in markets that are not active; and model-derived valuations in which all significant inputs are observable in active markets.
- Level 3 - valuations derived using one or more significant inputs that are not observable.


## Financial Instruments Recorded at Fair Value (in millions)

|  | March 31, 2018 |  |  |  |  |  |  |  | December 31, 2017 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Level 1 |  | Level 2 |  | Level 3 |  | Total |  | Level 1 |  | Level 2 |  | Level 3 |  | Total |  |
| Assets: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cash and cash equivalents | \$ | 153.3 | \$ | - | \$ | - | \$ | 153.3 | \$ | 208.8 | \$ | - | \$ | - | \$ | 208.8 |
| Deferred compensation asset (a) |  | 1.4 |  | - |  | - |  | 1.4 |  | 1.4 |  | - |  | - |  | 1.4 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Liabilities: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Deferred compensation obligation (a) |  | 1.4 |  | - |  | - |  | 1.4 |  | 1.4 |  | - |  | - |  | 1.4 |

(a) The deferred compensation obligation represents the balance of deferred compensation plus net investment earnings. The deferred compensation plan is funded through a rabbi trust. Trust funds are invested in mutual funds for which unit prices are quoted in active markets and are classified within Level 1 of the valuation hierarchy.

There were no transfers between Level 1, 2 or 3 during the periods presented.

## Other Financial Instruments

As of March 31, 2018, and December 31, 2017, the balance sheet carrying amounts for Accounts Receivable, Accounts Payable and Accrued Liabilities (excluding the deferred compensation obligation described above), and Payables under SWU Purchase Agreements approximate fair value because of their short-term nature.

The carrying value and estimated fair value of long-term debt follow (in millions):

|  | March 31, 2018 |  |  |  |  | December 31, 2017 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Carrying Value |  |  | Estimated Fair Value ${ }^{(a)}$ |  | Carrying Value |  |  | Estimated Fair Value ${ }^{(a)}$ |  |
| 8.25\% Notes | \$ | 129.4 | (b) | \$ | 60.5 | \$ | 132.4 | (b) | \$ | 61.7 |
| 8\% PIK Toggle Notes |  | 32.1 |  |  | 25.2 |  | 31.3 |  |  | 25.1 |

${ }^{(a)}$ Based on the most recent trading price as of the balance sheet date, which is considered a Level 2 input based on the frequency of trading.
(b) The carrying value of the $8.25 \%$ Notes consists of the principal balance of $\$ 74.3$ million and the sum of current and noncurrent interest payment obligations until maturity. Refer to Note 7, Debt.

## 9. PENSION AND POSTRETIREMENT HEALTH AND LIFE BENEFITS

The components of net periodic benefit expense (income) for the defined benefit pension plans were as follows (in millions):

|  | Three Months Ended March 31, |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2018 |  | 2017 |  |
| Service costs | \$ | 0.8 | \$ | 0.9 |
| Interest costs |  | 7.2 |  | 8.1 |
| Expected gains on plan assets |  | (10.2) |  | (10.2) |
| Net periodic benefit income | \$ | (2.2) | \$ | (1.2) |

The components of net periodic benefit expense for the postretirement health and life benefit plans were as follows (in millions):

|  | Three Months Ended March 31, |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2018 |  | 2017 |  |
| Interest costs | \$ | 1.4 | \$ | 1.8 |
| Amortization of prior service credits |  | - |  | (0.1) |
| Net periodic benefit expense | \$ | 1.4 | \$ | 1.7 |

The Company reports service costs for its defined benefit pension plans and its postretirement health and life benefit plans in Cost of Sales and Selling, General and Administrative Expenses. The remaining components of net periodic benefit expense (income) are reported as Nonoperating Components of Net Periodic Benefit Expense (Income).

## 10. NET INCOME (LOSS) PER COMMON SHARE

Basic net income (loss) per common share is calculated by dividing income (loss) allocable to common stockholders by the weighted average number of shares of common stock outstanding during the period. In calculating diluted net income (loss) per common share, the number of shares is increased by the weighted average number of potential shares related to stock compensation awards. No dilutive effect is recognized in a period in which a net loss has occurred.

|  | Three Months Ended March 31, |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2018 |  | 2017 |  |
| Net income (loss) allocable to common stockholders (in millions) | \$ | (27.0) | \$ | 6.6 |
|  |  |  |  |  |
| Shares in thousands: |  |  |  |  |
| Average common shares outstanding - basic |  | 9,103 |  | 9,063 |
| Potentially dilutive shares related to stock options ${ }^{(a)}$ |  | - |  | 111 |
| Average common shares outstanding - diluted |  | 9,103 |  | 9,174 |
|  |  |  |  |  |
| Net income (loss) per common share (in dollars): |  |  |  |  |
| Basic | \$ | (2.97) | \$ | 0.73 |
| Diluted | \$ | (2.97) | \$ | 0.72 |

(a) For the three months ended March 31, 2018, common stock equivalents of less than 0.1 million shares are excluded from the diluted calculation as a result of the net loss. Common stock equivalents related to stock options were less than 0.1 million shares for the three months ended March 31, 2017.

Options outstanding and considered anti-dilutive as their exercise price exceeded the average share market price totaled 0.4 million shares and 0 shares for the three months ended March 31, 2018 and 2017, respectively.

## 11. COMMITMENTS AND CONTINGENCIES

## Commitments under SWU Purchase Agreement

## TENEX

A major supplier of SWU to the Company is the Russian government entity Joint Stock Company "TENEX" ("TENEX"). Under a 2011 agreement with TENEX, as amended, (the "Russian Supply Agreement"), the Company purchases SWU contained in LEU received from TENEX, and the Company delivers natural uranium to TENEX for the LEU's uranium component. The LEU that Centrus obtains from TENEX under the agreement is subject to quotas and other restrictions applicable to commercial Russian LEU. The Company may reschedule SWU quantities scheduled for purchase through 2022 into the period 2023-2026, in return for the purchase of additional SWU in those years. Depending on the total purchase obligations rescheduled to 2023-2026, the Company may defer certain limited quantities beyond 2026.

The Russian Supply Agreement provides that the Company must pay for all SWU in its minimum purchase obligation each year, even if it fails to submit orders for such SWU. The Company would then have the right to take the unordered SWU in the following year. Pricing terms for SWU under the Russian Supply Agreement are based on a mix of market-related price points and other factors.

## Orano

On April 27, 2018, the Company's operating subsidiary, Enrichment Corp., entered into a long-term agreement (the "Orano Supply Agreement") with Orano Cycle (formerly, AREVA NC) ("Orano") for the long-term supply to the Company of SWU contained in LEU, commencing as early as 2021. See Note 14, Subsequent Event.

## Milestones Under the 2002 DOE-USEC Agreement

The Company and DOE signed an agreement dated June 17, 2002, as amended (the "2002 DOE-USEC Agreement"), pursuant to which the parties made long-term commitments directed at resolving issues related to the stability and security of the domestic uranium enrichment industry. DOE consented to the assumption by Centrus of the 2002 DOE-USEC Agreement and other agreements between the Company and DOE subject to an express reservation of all rights, remedies and defenses by DOE and Centrus under those agreements as part of the Company's Chapter 11 bankruptcy process. The 2002 DOE-USEC Agreement requires Centrus to develop, demonstrate and deploy advanced enrichment technology in accordance with milestones and provides for remedies in the event of a failure to meet a milestone under certain circumstances.

DOE has specific remedies under the 2002 DOE-USEC Agreement if Centrus fails to meet a milestone that would adversely impact its ability to begin commercial operations of the American Centrifuge Plant on schedule, and such delay was within Centrus' control or was due to its fault or negligence or if Centrus abandons or constructively abandons the commercial deployment of an advanced enrichment technology. These remedies include terminating the 2002 DOE-USEC Agreement, revoking Centrus' access to DOE's centrifuge technology that is required for the success of the American Centrifuge project, requiring Centrus to transfer certain rights in the American Centrifuge technology and facilities to DOE, and requiring Centrus to reimburse DOE for certain costs associated with the American Centrifuge project.

The 2002 DOE-USEC Agreement provides that if a delaying event beyond the control and without the fault or negligence of Centrus occurs that could affect Centrus' ability to meet an American Centrifuge Plant milestone, DOE and Centrus will jointly meet to discuss in good faith possible adjustments to the milestones as appropriate to accommodate the delaying event. The Company notified DOE that it had not met the June 2014 milestone within the time period provided due to events beyond its control and without the fault or negligence of the Company. The assumption of the 2002 DOE-USEC Agreement provided for under the Plan of Reorganization did not affect the ability of either party to assert all rights, remedies and defenses under the agreement and all such rights, remedies
and defenses are specifically preserved and all time limits tolled expressly including all rights, remedies and defenses and time limits relating to any missed milestones. DOE and Centrus have agreed that all rights, remedies and defenses of the parties with respect to any missed milestones since March 5, 2014, including the June 2014 and November 2014 milestones, and all other matters under the 2002 DOE-USEC Agreement continue to be preserved, and that the time limits for each party to respond to any missed milestones continue to be tolled.

## Legal Matters

Centrus is subject to various legal proceedings and claims, either asserted or unasserted, which arise in the ordinary course of business. While the outcome of these claims cannot be predicted with certainty, Centrus does not believe that the outcome of any of these legal matters will have a material adverse effect on its results of operations or financial condition.

## 12. STOCKHOLDERS' EQUITY

## Series B Preferred Stock

On February 14, 2017, Centrus issued 104,574 shares of Series B Preferred Stock as part of the securities exchange described in Note 7, Debt. The issuance of the Series B Preferred Stock was a non-cash financing transaction. The Series B Preferred Stock has a par value of $\$ 1.00$ per share and a liquidation preference of $\$ 1,000$ per share (the "Liquidation Preference"). The Series B Preferred Stock is recorded on the condensed consolidated balance sheet at fair value less transaction costs, or $\$ 4.6$ million, as of March 31,2018 , and December 31, 2017.

Holders of the Series B Preferred Stock are entitled to cumulative dividends of 7.5\% per annum of the Liquidation Preference. Centrus is obligated to pay cash dividends on the Series B Preferred Stock in an amount equal to the Liquidation Preference to the extent that dividends are declared by the Board and:
(a) its pension plans and Enrichment Corp.'s pension plans are at least $90 \%$ funded on a variable rate premium calculation in the current plan year;
(b) its net income calculated in accordance with GAAP (excluding the effect of pension remeasurement) for the immediately preceding fiscal quarter exceeds $\$ 7.5$ million;
(c) its free cash flow (defined as the sum of cash provided by (used in) operating activities and cash provided by (used in) investing activities) for the immediately preceding four fiscal quarters exceeds $\$ 35$ million;
(d) the balance of cash and cash equivalents calculated in accordance with GAAP on the last day of the immediately preceding quarter would exceed $\$ 150$ million after pro forma application of the dividend payment; and
(e) dividends may be legally paid under Delaware law.

Centrus has not met these criteria for the periods from issuance through March 31, 2018, and has not declared, accrued or paid dividends on the Series B Preferred Stock as of March 31, 2018. Dividends on the Series B Preferred Stock are cumulative to the extent not paid at any quarter-end, whether or not declared and whether or not there are assets of the Company legally available for the payment of such dividends in whole or in part. As of March 31, 2018, the Series B Preferred Stock has an aggregate liquidation preference of $\$ 113.5$ million, including accumulated dividends of $\$ 6.9$ million. As of December 31, 2017, the Series B Preferred Stock had an aggregate liquidation preference of $\$ 111.5$ million, including accumulated dividends of $\$ 6.9$ million.

Outstanding shares of the Series B Senior Preferred Stock are redeemable at the Company's option, in whole or in part, for an amount of cash equal to the Liquidation Preference, plus an amount equal to the accrued and unpaid dividends, if any, whether or not declared, through date of redemption.

## Rights Agreement

On April 6, 2016 (the "Effective Date"), the Company’s Board of Directors (the "Board") adopted a Section 382 Rights Agreement (the "Rights Agreement"). The Board adopted the Rights Agreement in an effort to protect shareholder value by, among other things, attempting to protect against a possible limitation on the Company's ability to use its net operating loss carryforwards and other tax benefits, which may be used to reduce potential future income tax obligations. As reported on the Company's Annual Report on Form 10-K for the year ended December 31, 2017, the Company had federal net operating losses of $\$ 789.7$ million as of December 31, 2017, that currently expire through 2037.

In connection with the adoption of the Rights Agreement, the Board declared a dividend of one preferred-share-purchase-right for each share of the Company's Class A Common Stock and Class B Common Stock outstanding as of the Effective Date. The rights initially trade together with the common stock and are not exercisable. In the absence of further action by the Board, the rights would generally become exercisable and allow a holder to acquire shares of a new series of the Company's preferred stock if any person or group acquires $4.99 \%$ or more of the outstanding shares of the Company's common stock, or if a person or group that already owns $4.99 \%$ or more of the Company's Class A Common Stock acquires additional shares representing $0.5 \%$ or more of the outstanding shares of the Company's Class A Common Stock. The rights beneficially owned by the acquirer would become null and void, resulting in significant dilution in the ownership interest of such acquirer.

The Board may exempt any acquisition of the Company's common stock from the provisions of the Rights Agreement if it determines that doing so would not jeopardize or endanger the Company's use of its tax assets or is otherwise in the best interests of the Company. The Board also has the ability to amend or terminate the Rights Agreement prior to a triggering event.

Effective on February 14, 2017, in connection with the settlement and completion of the exchange offer and consent solicitation, the Company amended the Rights Agreement solely to exclude acquisitions of the Series B Preferred Stock issued as part of the exchange offer and consent solicitation from the definition of "Common Shares."

The Company's stockholders approved the Rights Agreement at the 2017 annual meeting of stockholders on May 31, 2017. Unless earlier terminated in accordance with the Rights Agreement, the rights issued under the Rights Agreement expire on April 6, 2019.

## Shares Outstanding

Changes in the number of shares outstanding follow:

|  | Preferred Stock, Series B | $\begin{gathered} \text { Common Stock, } \\ \text { Class A } \end{gathered}$ | $\begin{gathered} \text { Common Stock, } \\ \text { Class B } \end{gathered}$ |
| :---: | :---: | :---: | :---: |
| Balance at December 31, 2016 | - | 7,563,600 | 1,436,400 |
| Issuance of Preferred Stock | 104,574 | - | - |
| Balance at March 31, 2017 | 104,574 | 7,563,600 | 1,436,400 |
| Balance at December 31, 2017 and March 31, 2018 | 104,574 | 7,632,669 | 1,406,082 |

## Accumulated Other Comprehensive Income (Loss)

The sole component of accumulated other comprehensive income (loss) ("AOCI") relates to activity in the accounting for pension and postretirement health and life benefit plans. Amortization of prior service credits is reclassified from AOCI and included in the computation of net periodic benefit expense as detailed in Note 9, Pension and Postretirement Health and Life Benefits.

## 13. SEGMENT INFORMATION

Gross profit is Centrus' measure for segment reporting. There were no intersegment sales in the periods presented. Refer to Note 2, Revenue Recognition and Contracts with Customers, for additional details on revenue for each segment.

|  | Three Months Ended March 31, |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2018 |  | 2017 |  |
|  | (in millions) |  |  |  |
| Revenue |  |  |  |  |
| LEU Segment: |  |  |  |  |
| Separative work units | \$ | 17.7 | \$ | 0.8 |
| Uranium |  | 3.6 |  | - |
|  |  | 21.3 |  | 0.8 |
| Contract Services Segment |  | 14.4 |  | 6.4 |
| Revenue | \$ | 35.7 | \$ | 7.2 |


| Segment Gross Profit (Loss) |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| LEU Segment | \$ | (13.5) | \$ | (1.9) |
| Contract Services Segment |  | 7.9 |  | (1.0) |
| Gross loss | \$ | (5.6) | \$ | (2.9) |

## 14. SUBSEQUENT EVENT

On April 27, 2018, the Company's operating subsidiary, Enrichment Corp., entered into the Orano Supply Agreement for the longterm supply of SWU contained in LEU to the Company, nominally commencing in 2023.

Under the Agreement, the Company is obligated to purchase a minimum of approximately 2.4 million SWU over six (6) years. The Company may elect to begin to accept deliveries as early as 2021 or to defer the commencement of purchases until 2024 and has the option to extend the six-year purchase period for an additional two (2) years. If the Company exercises its options for the two additional years, the minimum amount that the Company must purchase shall increase to approximately 3.7 million SWU. The Orano Supply Agreement provides significant flexibility to adjust purchase volumes, subject to annual minimums and maximums that vary year by year. The pricing for the SWU purchased by the Company is determined by a formula that uses a combination of market-related price points and other factors, and is subject to certain floors and ceilings. Prices are payable in a combination of dollars and Euros.

In addition to paying for the SWU in the LEU delivered by Orano, the Company will supply natural uranium for the natural uranium feed material component of the LEU. U.S. imports of LEU from France are currently subject to an antidumping order that will remain in effect through at least the second quarter of 2019. Under the terms of the Orano Supply Agreement, Orano will have the right to partially limit the amount of LEU that can be delivered in the United States for so long as the LEU is subject to the antidumping order.

## Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion should be read in conjunction with, and is qualified in its entirety by reference to, the unaudited condensed consolidated financial statements and related notes appearing elsewhere in this report.

## Overview

Centrus Energy Corp. ("Centrus" or the "Company") is a trusted supplier of nuclear fuel and services for the nuclear power industry. References to "Centrus", the "Company", or "we" include Centrus Energy Corp. and its wholly owned subsidiaries as well as the predecessor to Centrus, unless the context otherwise indicates.

Our primary business involves the sale of low-enriched uranium ("LEU") or its components and natural uranium to utilities operating commercial nuclear power plants. LEU is a critical component in the production of nuclear fuel for reactors that produce electricity. We supply LEU to both domestic and international utilities for use in nuclear reactors worldwide. We provide LEU from multiple sources including our inventory, medium- and long- term supply contracts, and spot purchases. As a long-term supplier of LEU to our customers, our objective is to provide value through the reliability and diversity of our supply sources. Our long-term goal is to resume commercial enrichment production, and we are exploring approaches to that end.

With our multi-decade experience in uranium enrichment, we continue to be a leader in the development of advanced uranium enrichment technology. We are performing research and demonstration work on our advanced centrifuge technology to support U.S. energy and national security through our contract with UT-Battelle, LLC ("UT-Battelle"), the management and operating contractor of Oak Ridge National Laboratory ("ORNL") for the U.S. Department of Energy ("DOE"). We believe that this technology could play a critical role in meeting U.S. national and energy security needs and advancing our nation's nonproliferation objectives.

The nuclear industry in general, and the nuclear fuel industry in particular, is in a period of significant change, which continues to affect the competitive landscape we face. The nuclear fuel industry remains oversupplied, creating downward pressures on pricing, with uncertainty regarding the timing of industry expansion globally. Changes in the competitive landscape may adversely affect pricing trends, change customer spending patterns, or create uncertainty. To address these changes, we have adjusted and will continue to address our cost structure and operations and may evaluate opportunities to grow our business organically or through acquisitions and other strategic transactions.

We are working to leverage our unique technical expertise and facilities to support leading companies in the fields of advanced nuclear reactors, nuclear medicine, and related industries as well as the U.S. government. Our experience developing, licensing and manufacturing advanced nuclear technologies positions us to provide critical design, engineering, manufacturing and other services to a broad range of potential clients, including those involving sensitive or classified technologies.

We are also actively considering, and expect to consider from time to time in the future, potential strategic transactions, which could involve, without limitation, acquisitions and/or dispositions of businesses or assets. These transactions could also involve joint ventures or investments in businesses, products or technologies. In connection with any such transaction, we may seek additional debt or equity financing, contribute or dispose of assets, assume additional indebtedness, or partner with other parties to consummate a transaction.

## Revenue

We have two reportable segments: the LEU Segment and the Contract Services Segment. The LEU Segment is currently our primary business focus. Revenue from our LEU Segment is derived primarily from:

- sales of the SWU component of LEU,
- sales of both the SWU and uranium components of LEU, and
- sales of natural uranium.

Our Contract Services Segment reflects our technical, manufacturing and engineering services offered to public and private sector customers, including the American Centrifuge engineering and testing activities we perform as a contractor for UT-Battelle.

## SWU and Uranium Sales

Revenue for our LEU Segment accounted for approximately $89 \%$ of our total revenue in 2017. The majority of our customers are domestic and international utilities that operate nuclear power plants, with international sales constituting approximately $25 \%$ to $45 \%$ of revenue from our LEU Segment in recent years. Our agreements with electric utilities are primarily long-term, fixed-commitment contracts under which our customers are obligated to purchase a specified quantity of the SWU component of LEU (or the SWU and uranium components of LEU) from us. Our agreements for natural uranium sales are generally shorter-term, fixed-commitment contracts.

Our revenues, operating results and cash flows can fluctuate significantly from quarter to quarter and year to year. Revenue is recognized at the time LEU or uranium is delivered under the terms of our contracts. The timing of customer demand is affected by, among other things, electricity markets, reactor operations, maintenance and refueling outages, and customer inventories. In the current market environment, some customers are building inventories and may choose to take deliveries under annual purchase obligations later in the year. Customer payments for the SWU component of LEU average generally $\$ 10$ million to $\$ 15$ million per order. As a result, a relatively small change in the timing of customer orders for LEU may cause significant variability in operating results.

Utility customers in general have the option to defer physical receipt of LEU or uranium purchased from Centrus beyond the contractual sale period, resulting in the deferral of costs and revenue recognition. Refer to Note 2, Revenue Recognition and Contracts with Customers, to the unaudited condensed consolidated financial statements for further details.

Our financial performance over time can be significantly affected by changes in prices for SWU and uranium. Since 2011, market prices for SWU and uranium have significantly declined. Since our sales order book includes contracts awarded to us in previous years, the average SWU price billed to customers typically lags behind published price indicators by several years, which means that average prices under contract today exceed current market prices. The long-term SWU price indicator, as published by TradeTech, LLC in Nuclear Market Review, is an indication of base-year prices under new long-term enrichment contracts in our primary markets. The following chart summarizes TradeTech's long-term and spot SWU price indicators, the long-term price for uranium hexafluoride ("UF6"), as calculated by Centrus using indicators published in Nuclear Market Review, and TradeTech's spot price indicator for UF6:

## SWU and Uranium Market Price Indicators



12/31/11 $12 / 31 / 12 \quad 12 / 31 / 1312 / 31 / 14 \quad 12 / 31 / 15 \quad 12 / 31 / 16 \quad 12 / 31 / 17 \quad 03 / 31 / 18$

> - SWU long-term price indicator $(\$ / \mathrm{SWU})$
> - SWU spot price indicator $(\mathrm{S} / \mathrm{SWU})$
> $-\Delta-$ UF6 long-term price composite $(\mathrm{S} / \mathrm{KgU})$
> $-\nabla-$ UF6 spot price indicator $(\mathrm{S} / \mathrm{KgU})$

Our contracts with customers are denominated in U.S. dollars, and although revenue has not been directly affected by changes in the foreign exchange rate of the U.S. dollar, we may have a competitive price advantage or disadvantage obtaining new contracts in a competitive bidding process depending upon the weakness or strength of the U.S. dollar. Costs of our primary competitors are denominated in other currencies. Our contracts with suppliers have historically been denominated in U.S. dollars. On April 27, 2018, we entered into an agreement with Orano Cycle (formerly, AREVA NC) for the long-term supply of SWU. The Company may elect to begin deliveries as early as 2021 . Purchases will be payable in a combination of U.S dollars and Euros and we may be subject to exchange rate risk for the portion of purchases payable in Euros.

On occasion, we will accept payment in the form of uranium. Revenue from the sale of SWU under such contracts is recognized at the time LEU is delivered and is based on the fair value of the uranium at contract inception received in exchange for the SWU.

Cost of sales for SWU and uranium is based on the amount of SWU and uranium sold and delivered during the period and unit inventory costs. Unit inventory costs are determined using the monthly moving average cost method. Changes in purchase costs have an effect on inventory costs and cost of sales over current and future periods. Cost of sales includes costs for inventory management at off-site licensed locations. Cost of sales also includes certain legacy costs related to former employees of the Portsmouth and Paducah gaseous diffusion plants.

## Contract Services

Our Contract Services Segment reflects our technical, manufacturing and engineering services offered to public and private sector customers, including the American Centrifuge engineering and testing activities we perform as a contractor for UT-Battelle. With our private sector customers, we seek to leverage our domestic enrichment experience and engineering know-how to assist customers with a range of engineering and advanced manufacturing projects including the production of fuel for next-generation nuclear reactors and the development of related facilities.

## American Centrifuge

We have a long record as a global leader in advanced technology, manufacturing and engineering. Our manufacturing, engineering and testing facilities and our highly-trained workforce are deeply engaged in advancing the next generation of uranium enrichment technology. We are exploring a number of options for returning to domestic production in the future.

In February 2016, we completed a successful three-year demonstration of the existing American Centrifuge technology at our facility in Piketon, Ohio, with 120 machines linked together in a cascade to simulate industrial operating conditions. Since then our government contracts with UT-Battelle have provided for continued engineering and testing work on the American Centrifuge technology at our facilities in Oak Ridge, Tennessee. Our recently completed contract with UT-Battelle was for the period from October 1, 2016, through September 30, 2017, and generated revenue of approximately $\$ 25.0$ million. On October 26, 2017, the parties executed a fixed price contract for the period from October 1, 2017, through September 30, 2018, that is expected to generate total revenue of approximately $\$ 16.0$ million upon completion of defined milestones. The ORNL contracts have been funded incrementally. Funding for the program is provided to UT-Battelle by the federal government, which is currently operating under a continuing resolution.

American Centrifuge expenses that are outside of our contracts with UT-Battelle are included in Advanced Technology License and Decommissioning Costs on the consolidated statement of operations, including ongoing costs for work related to the termination of the NRC license and DOE lease for the Piketon facility. Centrus commenced with the decontamination and decommissioning ("D\&D") of the Piketon facility in accordance with NRC requirements in 2016. Most of the D\&D work has been completed as of March 31, 2018. The estimated fair value of the remaining costs to complete the D\&D work, included in Accounts Payable and Accrued Liabilities on the condensed consolidated balance sheet, is $\$ 1.0$ million as of March 31, 2018, and December 31, 2017. We anticipate incurring costs of approximately $\$ 16$ million from the second quarter of 2018 through the second quarter of 2019 to terminate the NRC license and complete the DOE lease turnover activities required to return the facility to DOE when the lease expires in June 2019.

## X-Energy

On March 26, 2018, we entered into a Services Agreement to Provide Technical and Resource Support, effective March 26, 2018, with X-Energy LLC, a Maryland limited liability company ("X-Energy"). Under the terms of the services agreement, we will provide (i) technical and resource support to X-Energy for criticality safety evaluation of processing equipment, design of fresh fuel transport packages, and conceptual mock-up of a nuclear fuel production facility and (ii) non-cash in-kind contributions to X-Energy subject to a cooperative agreement between X-Energy and the United States government. The technical and resource support provided by us to XEnergy will be performed pursuant to separate task orders issued under and pursuant to the services agreement.

The initial task orders run through December 31, 2018, subject to mid-year continuation of X-Energy's Department of Energy Advanced Reactor Concepts Cooperative Agreement. The awarding of any additional task orders to us will be dependent upon the receipt of additional funding.

Depending upon the pricing outlined in the task orders, payment for work performed by us pursuant to the services agreement will either be fixed price based or time-and-materials based. The initial task orders in 2018 provide for time-and-materials based pricing with payments to be made to us totaling approximately $\$ 4.4$ million with the value of our non-cash in-kind contributions expected to be approximately $\$ 2.5$ million.

## Site Services Work

We formerly performed sites services work under contracts with DOE and its contractors at the former Portsmouth and Paducah gaseous diffusion plants. On January 11, 2018, we entered into a settlement agreement with DOE and the United States government regarding breach of contract claims relating to this work. DOE agreed to settle all claims raised as part of and subsequent to the litigation for a total of $\$ 24.0$ million and provide a complete close out of all such contracts and subcontracts settled under the settlement agreement without any further audit or review of our costs or incurred cost submissions. Prior to the settlement, we had a receivables balance related to the claims being settled of $\$ 14.5$ million. In the three months ended March 31, 2018, we (a) received $\$ 4.7$ million from the United States government, (b) applied approximately $\$ 19.3$ million of unapplied payments received from the United States government in prior years against the receivables balance, and (c) recorded additional revenue of $\$ 9.5$ million.

Centrus and DOE have yet to fully settle the Company's claims for reimbursements for certain pension and postretirement benefits costs related to past contract work performed at the Portsmouth and Paducah sites. There is the potential for additional revenue to be recognized for this work pending the outcome of legal proceedings related to the Company's claims for payment and the potential release of previously established valuation allowances on receivables.

## 2018 Outlook

We anticipate SWU and uranium revenue in 2018 in a range of $\$ 150$ million to $\$ 175$ million, reflecting a decline in average sales prices compared to 2017 as more sales are made under contracts that reflect more recent market conditions. We anticipate total revenue in a range of $\$ 175$ million to $\$ 200$ million. Consistent with prior years, revenue continues to be most heavily weighted to the fourth quarter; we expect more than one-half of our 2018 revenue to be generated in the fourth quarter. We expect to end 2018 with a cash and cash equivalents balance in a range of $\$ 100$ million to $\$ 125$ million. The anticipated decrease in cash and cash equivalents in 2018 is driven by the expected timing of purchases under supply agreements and an increase in required cash contributions to our postretirement benefit plans.

Our financial guidance is subject to a number of assumptions and uncertainties that could affect results either positively or negatively. Variations from our expectations could cause differences between our guidance and our ultimate results. Among the factors that could affect our results are:

- Additional short-term purchases or sales of SWU and uranium;
- Timing of customer orders, related deliveries, and purchases of LEU or components;
- The outcome of legal proceedings and other contingencies;
- Potential use of cash for strategic initiatives;
- Actions taken by our customers, including actions that might affect our existing contracts, as a result of market and other conditions impacting our customers and the industry; and
- Additional costs for decontamination and decommissioning of our facility in Ohio.

See also "Forward Looking Statements" earlier in this report for additional information.

## Results of Operations

## Basis of Presentation

On January 1, 2018, we adopted several new accounting standards and certain prior period amounts have been recast to conform with the current presentation. For the adoption of the new revenue standard using the modified retrospective method, results for reporting periods beginning after January 1, 2018, are presented under the new guidance, while prior period amounts are not adjusted and continue to be reported in accordance with the previous guidance. Refer to Note 1, Basis of Presentation, to the unaudited condensed consolidated financial statements for further details.

## Segment Information

The following tables present elements of the accompanying condensed consolidated statements of operations that are categorized by segment (dollar amounts in millions):

|  | Three Months Ended March 31, |  |  |  | \$ Change |  | \% Change |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2018 |  | 2017 |  |  |  |  |
| LEU Segment |  |  |  |  |  |  |  |
| Revenue: |  |  |  |  |  |  |  |
| SWU revenue | \$ | 17.7 | \$ | 0.8 | \$ | 16.9 | 2,113 \% |
| Uranium revenue |  | 3.6 |  | - |  | 3.6 | - |
| Total |  | 21.3 |  | 0.8 |  | 20.5 | 2,563 \% |
| Cost of sales |  | 34.8 |  | 2.7 |  | (32.1) | $(1,189) \%$ |
| Gross loss | \$ | (13.5) | \$ | (1.9) | \$ | (11.6) |  |
|  |  |  |  |  |  |  |  |
| Contract Services Segment |  |  |  |  |  |  |  |
| Revenue | \$ | 14.4 | \$ | 6.4 | \$ | 8.0 | 125 \% |
| Cost of sales |  | 6.5 |  | 7.4 |  | 0.9 | 12 \% |
| Gross profit (loss) | \$ | 7.9 | \$ | (1.0) | \$ | 8.9 |  |
|  |  |  |  |  |  |  |  |
| Total |  |  |  |  |  |  |  |
| Revenue | \$ | 35.7 | \$ | 7.2 | \$ | 28.5 | 396 \% |
| Cost of sales |  | 41.3 |  | 10.1 |  | (31.2) | (309)\% |
| Gross loss | \$ | (5.6) | \$ | (2.9) | \$ | (2.7) |  |

## Revenue

Revenue from the LEU Segment increased $\$ 20.5$ million in the three months ended March 31, 2018, compared to the corresponding period in 2017, reflecting the variability in timing of utility customer orders. Revenue from the Contract Services Segment increased $\$ 8.0$ million in the three months ended March 31, 2018, compared to the corresponding period in 2017, reflecting \$9.5 million of revenue related to the January 2018 settlement with DOE related to past work performed, partially offset by the reduced scope of contract work for American Centrifuge technology services in the current period.

## Cost of Sales

Cost of sales for the LEU Segment increased $\$ 32.1$ million in the three months ended March 31, 2018, compared to the corresponding period in 2017, due to the increases in sales volumes.

Cost of sales for the Contract Services Segment declined $\$ 0.9$ million in the three months ended March 31, 2018, compared to the corresponding period in 2017, due to the reduced scope of contract work.

## Gross Loss

We realized a gross loss of $\$ 5.6$ million in the three months ended March 31, 2018, an increase of $\$ 2.7$ million compared to the gross loss of $\$ 2.9$ million in the corresponding period in 2017. We realized an increase in gross loss of $\$ 11.6$ million for the LEU Segment. SWU sales in the three months ended March 31, 2018, reflect a greater concentration of sales made under contracts that reflect lower prices under more recent market conditions.

Excluding the $\$ 9.5$ million of revenue in the current period from the January 2018 settlement with DOE related to past work performed, the gross loss for the Contract Services Segment in the three months ended March 31, 2018, was $\$ 1.6$ million, compared to the gross loss of $\$ 1.0$ million the corresponding period in 2017.

## Impact of Legacy Costs

We ceased uranium enrichment at the Portsmouth GDP in 2001 and the Paducah GDP in 2013. Included in cost of sales are costs related to benefits for former GDP employees. These legacy costs are distinct from our current costs of acquiring SWU and uranium for sale. The following table presents the impact of legacy costs on gross profit for the LEU Segment (dollar amounts in millions):

|  | Three Months Ended March 31, |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2018 |  | 2017 |  |
| LEU Segment (GAAP) |  |  |  |  |
| Gross loss | \$ | (13.5) | \$ | (1.9) |
| Gross margin |  | (63.4)\% |  | (237.5)\% |
|  |  |  |  |  |
| Legacy costs included in cost of sales: |  |  |  |  |
| Pension and postretirement health and life benefits | \$ | 0.8 | \$ | 0.9 |
| Disability obligations and other |  | 0.2 |  | (0.1) |
| Legacy costs | \$ | 1.0 | \$ | 0.8 |
|  |  |  |  |  |
| LEU Segment excluding legacy costs (non-GAAP) |  |  |  |  |
| Gross loss excluding legacy costs | \$ | (12.5) | \$ | (1.1) |
| Gross margin excluding legacy costs |  | (58.7)\% |  | (137.5)\% |

We believe the non-GAAP financial measures above, when considered together with the corresponding GAAP measures and the reconciliation above, can provide additional understanding of the Company's financial performance and underlying profitability. Management uses the non-GAAP financial measures to provide investors with a more complete understanding of the Company's historical results and trends.

These non-GAAP financial measures are used in addition to and in conjunction with results presented in accordance with our GAAP results. The non-GAAP financial measures should be viewed in addition to, and not as a substitute for, or superior to, financial measures calculated in accordance with GAAP. The non-GAAP financial measures used by the Company may be calculated differently from, and therefore may not be comparable to, non-GAAP financial measures used by other companies.

## Non-Segment Information

The following tables present elements of the accompanying condensed consolidated statements of operations that are not categorized by segment (dollar amounts in millions):

|  | Three Months Ended March 31, |  |  |  | \$ Change |  | \% Change |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2018 |  | 2017 |  |  |  |  |
| Gross loss | \$ | (5.6) | \$ | (2.9) | \$ | (2.7) | (93)\% |
| Advanced technology license and decommissioning costs |  | 7.7 |  | 6.1 |  | (1.6) | (26)\% |
| Selling, general and administrative |  | 11.2 |  | 12.4 |  | 1.2 | 10 \% |
| Amortization of intangible assets |  | 1.3 |  | 1.2 |  | (0.1) | (8)\% |
| Special charges for workforce reductions and advisory costs |  | 0.6 |  | 2.4 |  | 1.8 | 75 \% |
| Gains on sales of assets |  | (0.1) |  | (1.0) |  | (0.9) | (90)\% |
| Operating loss |  | (26.3) |  | (24.0) |  | (2.3) | (10)\% |
| Gain on early extinguishment of debt |  | - |  | (33.6) |  | (33.6) | (100)\% |
| Nonoperating components of net periodic benefit expense (income) |  | (1.6) |  | (0.4) |  | 1.2 | 300 \% |
| Interest expense |  | 1.0 |  | 2.9 |  | 1.9 | 66 \% |
| Investment income |  | (0.6) |  | (0.3) |  | 0.3 | 100 \% |
| Income (loss) before income taxes |  | (25.1) |  | 7.4 |  | (32.5) | $\mathrm{n} / \mathrm{m}$ |
| Income tax benefit |  | (0.1) |  | (0.2) |  | (0.1) | (50)\% |
| Net income (loss) |  | (25.0) |  | 7.6 |  | (32.6) | $\mathrm{n} / \mathrm{m}$ |
| Preferred stock dividends - undeclared and cumulative |  | 2.0 |  | 1.0 |  | 3.0 | (300)\% |
| Net income (loss) allocable to common stockholders | \$ | (27.0) | \$ | 6.6 | \$ | (33.6) | $\mathrm{n} / \mathrm{m}$ |

$\mathrm{n} / \mathrm{m}$ - calculation not meaningful

## Advanced Technology License and Decommissioning Costs

Advanced technology license and decommissioning costs consist of American Centrifuge expenses that are outside of our contracts with UT-Battelle, including ongoing costs for work at the Piketon facility. Costs increased $\$ 1.6$ million (or $26 \%$ ) to $\$ 7.7$ million in the three months ended March 31, 2018, compared to the corresponding period in 2017. In the current period, efforts at the Piketon facility were focused on NRC license termination and DOE lease turnover activities and the related costs were charged to expense. In the prior period, efforts were primarily focused on decontamination and decommissioning ("D\&D") of the Piketon facility and the related costs were recorded as a reduction of the $\mathrm{D} \& \mathrm{D}$ liability. In addition, a greater allocation of Piketon facility costs were charged to the license and lease termination effort in the current period following the relocation of certain corporate functions from the Piketon facility.

## Selling, General and Administrative

Selling, general and administrative ("SG\&A") expenses declined $\$ 1.2$ million (or 10\%) in the three months ended March 31, 2018, compared to the corresponding periods in 2017. Allocated overhead declined $\$ 0.7$ million following the relocation of certain corporate functions from the Piketon facility. Consulting costs declined $\$ 0.4$ million in the more recent three-month period.

## Amortization of Intangible Assets

Amortization expense for the intangible asset related to the September 2014 sales order book is a function of SWU sales volume under that order book, which increased in the three-months ended March 31, 2018, compared to
the corresponding period in 2017. The intangible asset related to customer relationships is amortized on a straight-line basis.

## Special Charges for Workforce Reductions and Advisory Costs

In the three months ended March 31, 2018 and 2017, special charges included estimated employee termination benefits of $\$ 0.5$ million and $\$ 0.8$ million, respectively, net of non-cash settlements. In the three months ended March 31, 2018 and 2017, we incurred advisory costs of $\$ 0.1$ million and $\$ 1.6$ million, respectively, related to updating its information technology systems.

## Gain on Early Extinguishment of Debt

In the first quarter of 2017, we recognized a gain of $\$ 33.6$ million related to the exchange of securities and cash on February 14 , 2017, which is net of transaction costs of $\$ 9.0$ million and previously deferred issuance costs related to the $8 \%$ PIK Toggle Notes of $\$ 0.4$ million. Refer to Note 7 , Debt, of the unaudited condensed consolidated financial statements.

## Nonoperating Components of Net Periodic Benefit Expense (Income)

Effective January 1, 2018, a new accounting standard requires components of retirement benefit expense/income other than service cost to be presented below the subtotal for operating income (loss). For the three months ended March 31, 2017, $\$ 0.4$ million of income was reclassified from Cost of Sales of the LEU Segment to conform with the current presentation. The increase in nonoperating components of net periodic benefit income reflected a decline in market interest rates used to measure retirement benefit obligations on a present value basis.

## Interest Expense

Interest expense declined $\$ 1.9$ million (or 66\%) in the three months ended March 31, 2018, compared to the corresponding periods in 2017, due to the early extinguishment of $87 \%$ of the outstanding principal amount of the $8 \%$ PIK Toggle Notes on February 14, 2017. No interest expense is recognized on the $8.25 \%$ Notes as described in Note 7 , Debt, of the unaudited condensed consolidated financial statements.

Income Tax Benefit
The income tax benefit was $\$ 0.1$ million in the three months ended March 31,2018 compared to $\$ 0.2$ million in the three months ended March 31, 2017. The income tax benefit in both three-month periods resulted from discrete items for reversals of previously accrued amounts associated with liabilities for unrecognized benefits.

## Net Loss

Our net loss was $\$ 25.0$ million in the three months ended March 31,2018 , compared to net income of $\$ 7.6$ million in the three months ended March 31, 2017. Net income for the three months ended March 31, 2017, included the non-recurring gain on early extinguishment of debt of $\$ 33.6$ million. Additionally, the unfavorable variance of $\$ 32.6$ million was impacted by a $\$ 2.7$ million increase in the gross loss.

## Preferred Stock Dividends - Undeclared and Cumulative

Holders of the Series B Preferred Stock are entitled to cumulative dividends of $7.5 \%$ per annum of the aggregate liquidation preference at origination of $\$ 104.6$ million. We did not meet the criteria for a dividend payment obligation for the quarter ended March 31, 2018, and we have not declared, accrued or paid dividends on the Series B Preferred Stock since issuance on February 14, 2017. Dividends on the Series B Preferred Stock are cumulative to the extent not paid at any quarter-end, whether or not declared and whether or not there are assets of the Company legally available for the payment of such dividends in whole or in part.

## Liquidity and Capital Resources

We ended the first quarter of 2018 with a consolidated cash balance of $\$ 153.3$ million. We anticipate having adequate liquidity to support our business operations for at least the next 12 months from the date of this report. Our view of liquidity is dependent on, among other things, our operations and the level of expenditures and government funding for the American Centrifuge program. Liquidity requirements for our existing operations are affected primarily by the timing and amount of customer sales and our inventory purchases.

We believe our sales order book in our LEU Segment is a source of stability for our liquidity position. Our sales order book extends for more than a decade. Although, based on current market conditions, we see limited uncommitted demand for LEU for the remainder of this decade before an anticipated rise in uncommitted demand in the 2020s, we continue to seek and make additional sales, including sales for delivery during that time period.

Substantially all revenue-generating operations of the Company are conducted at the subsidiary level. Centrus' principal source of funding for American Centrifuge activities is provided: (i) under the contract with UT-Battelle, the operator of ORNL; and (ii) from Centrus' wholly-owned subsidiary, Enrichment Corp. to Centrus and its $100 \%$ indirectly owned subsidiary American Centrifuge Operating, LLC pursuant to two secured intercompany financing notes. The financing obtained from Enrichment Corp. funds American Centrifuge activities pending receipt of payments related to work performed under the contract with UT-Battelle, American Centrifuge costs that are outside the scope of work under the contract with UT-Battelle, including D\&D and other costs of the Piketon facility, and general corporate expenses, including cash interest payments on our debt.

Capital expenditures are expected to be insignificant for at least the next 12 months.

In February 2016, Centrus completed a successful three-year demonstration of the American Centrifuge technology at its facility in Piketon, Ohio. U.S. government funding for American Centrifuge since October 2015 is now limited to research and development work at our facilities in Oak Ridge, Tennessee. As a result of reduced program funding, workforce reductions commenced in the fourth quarter of 2015 and, as of March 31, 2018, we expect to make payments of $\$ 3.8$ million for remaining workforce reductions through 2019. In the event that funding by the U.S. government is further reduced or discontinued, the American Centrifuge project may be subject to further demobilization, costs, delays and termination. Any such actions may have a material adverse impact on our ability to deploy the American Centrifuge technology and on our liquidity.

The D\&D of the Piketon facility was substantially complete as of March 31, 2018, with remaining estimated costs of $\$ 1.0$ million. We have previously provided financial assurance to the NRC for the $D \& D$ work in the form of surety bonds that are fully cash collateralized by us for $\$ 16.2$ million. We expect to receive cash when surety bonds are reduced and/or cancelled as the Company fulfills its D\&D obligations and the NRC license for the test facility is terminated.

We lease the Piketon facility from DOE. At the conclusion of the lease on June 30, 2019, without mutual agreement between us and DOE regarding other possible uses for the facility, we are obligated to return the facility to DOE in a condition that meets NRC requirements and in the same condition as the facility was in when it was leased to us (other than due to normal wear and tear). We estimate the cost for these lease termination obligations to be $\$ 0.8$ million as of March 31,2018 . We have previously provided financial assurance to DOE for the lease obligations in the form of surety bonds that are fully cash collateralized by us for $\$ 13.6$ million. We expect to receive cash when surety bonds are reduced and/or cancelled as the Company fulfills its lease termination obligations.

We anticipate incurring costs of approximately $\$ 16$ million from the second quarter of 2018 through the second quarter of 2019 to terminate the NRC license and complete the DOE lease turnover activities required to return the facility to DOE when the lease expires in June 2019. If costs to terminate the NRC license or complete the DOE lease turnover activities are greater than our estimates then such increased costs could have an adverse impact on our results of operations and liquidity.

The change in cash, cash equivalents and restricted cash from our condensed consolidated statements of cash flows are as follows on a summarized basis (in millions):

|  | Three Months Ended March 31, |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2018 |  | 2017 |  |
| Cash used in operating activities | \$ | (52.3) | \$ | (73.0) |
| Cash provided by investing activities |  | - |  | 0.6 |
| Cash used in financing activities |  | (3.0) |  | (36.6) |
| Decrease in cash and cash equivalents | \$ | (55.3) | \$ | (109.0) |

## Operating Activities

The net reduction of $\$ 55.9$ million in the SWU purchase payables balance, due to the timing of purchase deliveries, was a significant use of cash in the three months ended March 31, 2018. The operating loss of $\$ 26.3$ million in the three months ended March 31, 2018, net of non-cash expenses, was a use of cash. Sources of cash included the net reduction in receivables from utility customers of $\$ 29.5$ million.

In the corresponding period in 2017, the net reduction of $\$ 59.5$ million in the SWU purchase payables balance, due to the timing of purchase deliveries. Other uses of cash are reflected in the reduction of accounts payable and other liabilities of $\$ 9.4$ million. Sources of cash included the decline of accounts receivable of $\$ 23.0$ million due to collections from customers in the three-month period without increased sales and billings. The operating loss of $\$ 24.0$ million in the three months ended March 31, 2017, net of non-cash expenses, was a use of cash.

## Investing Activities

Capital expenditures were $\$ 0.1$ million in the three months ended March 31, 2018, and there were no significant capital expenditures in the corresponding period of 2017. Sales of unneeded assets and property yielded net proceeds of $\$ 0.1$ million and $\$ 0.6$ million in the three months ended March 31, 2018 and 2017, respectively.

## Financing Activities

In the three months ended March 31, 2018, the $\$ 3.0$ million payment of interest classified as debt is classified as a financing activity. Refer to Note 7, Debt, of the unaudited condensed consolidated financial statements regarding the accounting for the $8.25 \%$ Notes. In the three months ended March 31, 2017, we paid $\$ 27.6$ million as part of the February 2017 securities exchange described in Note 7 , Debt.

## Working Capital

| Cash and cash equivalents | $\begin{gathered} \text { March 31, } \\ 2018 \end{gathered}$ |  | $\underset{2017}{\text { December } 31,}$ |  |
| :---: | :---: | :---: | :---: | :---: |
|  | (in millions) |  |  |  |
|  | \$ | 153.3 | \$ | 208.8 |
| Accounts receivable |  | 15.0 |  | 60.2 |
| Inventories, net |  | 70.2 |  | 75.2 |
| Other current assets and liabilities, net |  | (108.9) |  | (180.7) |
| Working capital | \$ | 129.6 | \$ | 163.5 |

## Capital Structure and Financial Resources

Interest on the $8.25 \%$ Notes is payable semi-annually in arrears as of February 28 and August 31 based on a 360 -day year consisting of twelve 30 -day months. The $8.25 \%$ Notes are guaranteed on a subordinated and limited basis by, and secured by substantially all assets of, Enrichment Corp. The 8.25\% Notes mature on February 28, 2027.

The principal amount of the $8 \%$ PIK Toggle Notes is increased by any payment of interest in the form of PIK payments. We have the option to pay up to $5.5 \%$ per annum of interest due on the $8 \%$ PIK Toggle Notes in the form of PIK payments. The $8 \%$ PIK Toggle Notes are guaranteed and secured on a subordinated, conditional, and limited basis by Enrichment Corp. The $8.0 \%$ PIK Toggle Notes mature on September 30, 2019. However, the maturity date can be extended to September 30, 2024, upon the satisfaction of certain funding conditions described in the Indenture relating to the funding, under binding agreements, of (i) the American Centrifuge project or (ii) the implementation and deployment of a National Security Train Program utilizing American Centrifuge technology.

Additional terms and conditions of the $8.25 \%$ Notes and the $8 \%$ PIK Toggle Notes are described in Note 7, Debt, of the unaudited condensed consolidated financial statements and Note 9, Debt, of the audited consolidated financial statements in our Annual Report on Form 10-K for the year ended December 31, 2017.

Holders of the Series B Preferred Stock are entitled to cumulative dividends of 7.5\% per annum of the Liquidation Preference. We are obligated to pay cash dividends on our Series B Preferred Stock to the extent dividends are declared by the Board and certain criteria are met. We have not met these criteria for the periods from issuance through March 31, 2018, and has not declared, accrued or paid dividends on the Series B Preferred Stock as of March 31, 2018. Additional terms and conditions of the Series B Preferred Stock, including the criteria that must be met for the payment of dividends, are described in Note 12, Stockholders' Equity of the unaudited condensed consolidated financial statements.

The nuclear industry in general, and the nuclear fuel industry in particular, are in a period of significant change. We are actively considering, and expect to consider from time to time in the future, potential strategic transactions, which at any given time may be in various stages of discussions, diligence or negotiation. If we pursue opportunities that require capital, we believe we would seek to satisfy these needs through a combination of working capital, cash generated from operations or additional debt or equity financing.

We are managing our working capital to seek to improve the long-term value of our LEU business and are planning to continue funding the Company's qualified pension plans in the ordinary course because we believe that is in the best interest of all stakeholders. We expect that any other uses of working capital will be undertaken in light of these strategic priorities and will be based on the Company's determination as to the relative strength of its operating performance and prospects, financial position and expected liquidity requirements. In addition, we expect that any such other uses of working capital will be subject to compliance with contractual restrictions to which the Company and its subsidiaries are subject, including the terms and conditions of their debt securities and credit facilities. We continually evaluate alternatives to manage our capital structure, and may opportunistically repurchase, exchange or redeem Company securities from time to time.

## Off-Balance Sheet Arrangements

Other than outstanding letters of credit and surety bonds, our SWU purchase commitments and the license agreement with DOE relating to the American Centrifuge technology disclosed in our Annual Report on Form 10-K for the year ended December 31, 2017, there were no material off-balance sheet arrangements at March 31, 2018, or December 31, 2017.

## New Accounting Standards

Reference is made to New Accounting Standards in Note 1, Basis of Presentation, of the unaudited condensed consolidated financial statements for information on new accounting standards.

## Item 4. Controls and Procedures

## Evaluation of Disclosure Controls and Procedures

Centrus maintains disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) that are designed to ensure that information required to be disclosed by Centrus in reports it files or submits under the Exchange Act is recorded, processed, summarized and reported on a timely basis and that such information is accumulated and communicated to management, including the Chief Executive Officer and the Chief Financial Officer, as appropriate to allow for timely decisions regarding required disclosures.

As of March 31, 2018, the end of the period covered by this report, our management performed an evaluation, under the supervision and with the participation of the Chief Executive Officer and the Chief Financial Officer, of the effectiveness of our disclosure controls and procedures (as defined in Rule 13a-15(e) under the Exchange Act). Based on this evaluation, the Chief Executive Officer and the Chief Financial Officer concluded, as of March 31, 2018, that the Company's disclosure controls and procedures were effective.

## Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting during the quarter ended March 31, 2018, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

## PART II

## Item 1. Legal Proceedings

There have been no material changes to the Legal Proceedings set forth under Part I, Item 3, Legal Proceedings, in our Annual Report on Form 10-K for the year ended December 31, 2017.

Centrus is subject to various legal proceedings and claims, either asserted or unasserted, which arise in the ordinary course of business. While the outcome of these claims cannot be predicted with certainty, we do not believe that the outcome of any of these legal matters, individually and in the aggregate, will have a material adverse effect on our cash flows, results of operations or consolidated financial condition.

## Item 1A. Risk Factors

There have been no material changes to the Risk Factors described in Part I, Item 1A, Risk Factors, in our Annual Report on Form 10-K for the year ended December 31, 2017.

## Item 6. Exhibits

| 10.46 | Services Agreement to Provide Technical and Resource Support, effective March 26, 2018, by and between Centrus Energy Corp., <br> American Centrifuge Operating, LLC and X-Energy LLC. |
| :---: | :--- |
| 31.1 | Certification of the Chief Executive Officer pursuant to Rule 13a-14(a)/15d-14(a) under the Securities Exchange Act of 1934, as <br> amended. |
| 31.2 | Certification of the Chief Financial Officer pursuant to Rule 13a-14(a)/15d-14(a) under the Securities Exchange Act of 1934, as <br> amended. |
| 32.1 | Certification of Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1350. |
| 101 | Unaudited condensed consolidated financial statements from the Quarterly Report on Form 10-Q for the quarter ended March 31,2018, <br> filed in interactive data file (XBRL) format. |

## SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

## Centrus Energy Corp.

Date: May 9, 2018
By:
/s/ Marian K. Davis
Marian K. Davis
Senior Vice President, Chief Financial Officer and Treasurer
(Duly Authorized Officer and Principal Financial Officer)

Agreement No. 5004-DOE-070116-08 ACO Energy Corp.

Confidential information has been omitted in places marked "*****" and has been filed separately with the Securities and Exchange Commission. Confidential treatment has been requested with respect to this omitted information.

## Services Agreement to Provide Technical and Resource Support

## Services Agreement

This Services Agreement ("Agreement"), effective March 26, 2018 is made and entered into by and between X Energy LLC, a Maryland limited liability company, with offices at 7701 Greenbelt Road, Suite 320, Greenbelt, Maryland 20770 ("X-energy"), and American Centrifuge Operating, LLC, a Delaware limited liability company, with offices at 6901 Rockledge Drive, Suite 800, Bethesda, Maryland 20817 (" ACO") (each of X-energy and ACO individually a "Party" and collectively the "Parties").

WHEREAS, $X$ Energy is a U.S. nuclear power reactor and fuel design engineering services company that is developing the Xe-100 Pebble Bed Small Modular Reactor ("Xe-100"), a Generation IV, high-temperature gas-cooled nuclear power reactor, and the associated nuclear fuel designs for the $\mathrm{Xe}-100$;

WHEREAS, ACO is a U.S. supplier of enriched uranium fuel for commercial nuclear power plants in the United States and around the world;

WHEREAS, X-Energy and the U.S. Department of Energy ("DOE") entered into an Advanced Reactor Concept Cooperative Agreement No. DE-NE0008472 ("Cooperative Agreement"), which provides DOE funding, on a cost-shared basis, to solve critical challenges and enable the development of the $\mathrm{Xe}-100$ reactor, and further allows in-kind contributions to fulfill a portion of X-Energy's cost-sharing obligation (attached in Exhibit E); and

WHEREAS, X-Energy and ACO wish to enter into a contractual relationship whereby ACO will provide i) technical and resource support to X-energy on a time and materials or fixed-price basis for the development and licensing of X-energy's nuclear power reactor fuel production facility, and ii) in-kind contributions in support of X-energy's Cooperative Agreement in the form of low cost: a) lease to X-energy of space within a ACO-owned facility in Oak Ridge, Tennessee, and b) services pricing to X-energy.

NOW, THEREFORE, X-energy and ACO agree as follows:

1. Services. This is an Indefinite Delivery/Indefinite Quantity (IDIQ) services agreement that establishes the terms and conditions whereby X-energy will, through issuance of separate Task Orders (each, a "Task Order"), including those set forth herein in Exhibit B, to ACO, contract for technical and resource support services (the "Services") to support the development and licensing of X-energy's nuclear power reactor fuel production facility, as set forth in the following Project Task descriptions, and as more fully described in ACO's March 1st, proposal, attached hereto as Exhibit A:
1.1 The initial Task Orders are attached hereto collectively as Exhibit B.

X Energy, LLC
7701 Greenbelt Road, Suite 320, Greenbelt, MD 20770
1.2 The Parties recognize that there likely will be work in addition to what is listed above and what is currently included in the initial Task Orders. Thus, additional Task Orders, substantially in the same form as those Task Orders, shall be negotiated between the Parties and shall be deemed accepted and incorporated into this Agreement only if signed by both the ACO Contract Administrator (as defined in Section 4.1.1. below) and the X-energy Contract Administrator (as defined in Section 5.2 below), appointed pursuant to Section 4.1 and Section 5 , respectively.
1.3 Prior to issuing additional Task Orders, X-energy shall provide ACO with the following data, which together shall be considered a Task Order Request for Proposal ("Task Order RFP"):
1.3.1 A functional description of the work identifying the objectives or results desired from the contemplated Task Order.
1.3.2 Proposed performance standards to be used as criteria for determining whether the work requirements have been met.
1.3.3 A request to ACO to include the technical approach, period of performance, appropriate fair market valuation information of any in-kind contributions, time and materials estimates, applicable labor rates, and any other information required by X-energy to determine the acceptance of ACO's proposal.
1.4 ACO shall submit the response to each Task Order RFP to X-energy, and such response/proposal shall be valid for a minimum of 90 calendar days, unless otherwise noted by ACO.
1.5 ACO shall provide a technical approach for fulfilling the requirements specified in each Task Order RFP.
1.6 After review and any necessary discussions regarding the response to each Task Order RFP, X-energy may issue a Task Order for ACO's acceptance, containing, at a minimum, the following:
1.6.1 Date of the order.
1.6.2 Task Order number.
1.6.3 Functional description of the work identifying the objectives or results desired from the Task Order, including special instructions or other information necessary for performance of the Task Order.
1.6.4 Performance standards, and where appropriate, quality assurance standards.
1.6.5 Anticipated cost and/or fair market value each as agreed by the Parties in the Task Order.
1.6.6 Any other resources (travel, materials, equipment, facilities, etc.) authorized.
1.6.7 Delivery/performance schedule including start and end dates.
1.6.8 Place of Performance.

> X Energy, LLC

7701 Greenbelt Road, Suite 320, Greenbelt, MD 20770
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1.6.9 Authorized funding.
1.7 ACO shall provide the Services (a) in accordance with the terms and subject to the conditions set forth in the respective Task Order and this Agreement; (b) using personnel with required skills, experience, and qualifications; (c) in a timely, workmanlike, and professional manner; (d) in accordance with the professional standards recognized in the U.S. nuclear fuel industry; and (e) to the satisfaction of X-energy.
2. Indefinite Quantity
2.1 Performance shall be made only as authorized by formal Task Orders issued in accordance with Sections 1.6 through 1.10 .
2.2 There is no limit to the number of Task Orders that may be issued. X-energy may issue Task Orders as a result of Task Order RFPs issued in accordance with Section 1.7.
2.3 This Agreement and the work conducted pursuant to Task Orders issued hereunder is not intended to be exclusive as between the Parties.
3. In-Kind Contributions
3.1 In-kind contributions represent non-cash contributions provided by ACO, which can be applied by X-energy to fulfill a portion of X-Energy's cost-sharing obligation to the DOE under the Cooperative Agreement. In-kind contributions may be in the form of personal property (equipment and supplies), real property (land and buildings) or services which are directly beneficial, specifically identifiable and necessary to performance of the project or program under the Cooperative Agreement.
3.2 In-kind contributions will be identified in the Task Orders issued under this Agreement and are required to be:
3.2.1 Valued at no more than fair market value.
3.2.2 Verifiable from supporting documentation provided by ACO.
3.2.3 Necessary for the effective and efficient accomplishment of the Project.
3.2.4 Types of charges that would otherwise be allowable under ACO's Cost Accounting Standards Disclosure Statement and applicable Federal Acquisition Regulation standards and requirements.
3.2.5 Not charged to the Federal Government under any contract, agreement or grant, unless specifically authorized by legislation.
3.2.6 Not included as contributions for any other Federal program.
3.3 It is the Parties' intent that a portion of ACO's potential in-kind contribution will be in the form of a ***** reduction of the rent and certain other agreed-upon costs, which $X$-energy would otherwise pay to utilize the Premises (as defined below). The "Premises" shall refer to a 43,500 square foot portion of

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ACO's TMC facility in Oak Ridge, Tennessee referred to as "Fab-1", including any improvements located therein, as described on Exhibit C. The terms and conditions governing the in-kind contribution of the Premises is more fully described in paragraph 4.18.
3.4 The Parties also anticipate that ACO will provide additional in-kind contributions to $X$-energy in the form of formulaic discounts to the fair market price to be paid by X-energy under certain Task Orders issued pursuant to this Agreement. The Parties will document such formulas and discounted fair market prices in the appropriate Task Orders.

## 4. ACO Obligations. ACO shall:

4.1 Provide representatives for the following positions:
4.1.1 A primary contact to act as its authorized representative with respect to all matters pertaining to this Agreement (the "ACO Contract Administrator").
4.1.2 A project manager or technical representative for each executed Task Order who is authorized to discuss technical aspects of the work being performed. (collectively, with the ACO Contract Administrator, "ACO Representatives")
4.1.3 A sufficient number of employees or subcontractors to perform the Services set out in each Task Order, each of whose names, positions, billing rates, and respective levels of experience and any relevant licenses shall be set forth in the respective Task Order.
4.2 Make no changes in the above ACO Representatives except:
4.2.1 Upon written notice to X-energy.
4.2.2 Upon the written request of X-energy, in which case ACO shall use its best efforts to promptly appoint a qualified replacement; or
4.2.3 Upon the resignation, termination, death, or disability of an existing ACO Representative.
4.3 Assign only qualified, authorized ACO Representatives and employees to provide the Services. Prior to any personnel performing any work hereunder, ACO shall: (i) determine that such personnel have the legal right to work in the United States; and (ii) at its sole cost and expense, conduct background checks on such personnel, which background checks shall comprise at a minimum a review of credit history, references and criminal records, in accordance with state, federal and local law.
4.4 Obtain X-energy's written approval, which shall not be unreasonably withheld or delayed, prior to entering into agreements with or otherwise engaging any person, including all new third-party subcontractors or suppliers to provide any direct charge Services (each such approved subcontractor or other third party, a "Permitted Subcontractor"). For avoidance of doubt, all subcontractors engaged by ACO as of the date of this Agreement shall be considered Permitted Subcontractors. X-energy's approval shall not relieve ACO of its obligations under this Agreement, and ACO shall remain fully responsible for the performance of each such Permitted Subcontractor and its employees and shall direct its employees and Permitted Subcontractors to adhere to the terms and conditions of this

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Agreement and any Task Order. Nothing contained in this Agreement shall create any contractual relationship between X-energy and any ACO subcontractor or supplier.
4.5 Direct each Permitted Subcontractor to adhere to the confidentiality and intellectual property provisions of this Agreement, by entering into a non-disclosure agreement or intellectual property assignment or license agreement in a form that is reasonably satisfactory to $X$-energy.
4.6 Comply with all applicable laws and regulations in providing the Services.
4.7 Comply with, and direct each Permitted Subcontractor to comply with, all required DOE flow down provisions contained in Exhibit D in providing the Services.
4.8 To the extent practicable and not prohibited by law, rule or court order, provide prompt notice to X-energy (1) if it is being investigated or is suspended, debarred, or declared ineligible by any U.S. Government Agency or (2) if it receives a notice of proposed investigation or debarment from any U.S. Government Agency. Failure to so notify X-energy may be considered by X-Energy as a material breach of and default under this Agreement
4.9 Where not in conflict with American Centrifuge Operating, LLC (ACO) rules or policy, comply with all X-energy rules, regulations, and policies of which ACO has been made aware, in its provision of the Services, including security procedures concerning systems and data and remote access thereto, building security procedures, and general health and safety practices and procedures.
4.10 Maintain complete and accurate records of the labor and materials directly charged by ACO in providing the Services. During the Term (as defined in Section 13.1) and for a period of three (3) years thereafter, upon X-energy's written request, ACO shall provide access to X-energy or X-energy's representative under obligation of confidentiality acceptable to ACO copies of such records and interview ACO Representatives in connection with the provision of the Services; provided that X-energy provides ACO with reasonable advance written notice of the planned inspection, and any such inspection shall take place during regular business hours.
4.11 Agree and acknowledge that time is of the essence with respect to ACO's obligations hereunder and that prompt and timely performance of all such obligations, including all timetables, project milestones and other requirements in this Agreement and each Task Order, is required.
4.12 The labor rates included in Exhibit E are firm through December 31, 2018. However, in the event of a significant material event related to ACO's Cost Accounting Standards affecting the rates, the Parties agree to negotiate in good faith appropriate adjustments. Rates for subsequent annual periods will be negotiated in good faith by the Parties and, following agreement, this Agreement shall be amended to revise Exhibit E . Such increases shall not occur more frequently than once per contract year of the Term.
4.13 Ensure that ACO maintains sufficient facilities and resources to timely and competently perform all anticipated work under this Agreement. For the term of this Agreement, ACO will not reassign its employees or subcontractors that are required to timely and competently perform all anticipated work under this Agreement. Further, ACO agrees that the Fab-1 area as described in Section 3.3 of this

Agreement is critical to the work and will be available during the Term.
4.14 RESERVED.
4.15 To the extent practicable, use reasonable best efforts to ensure that current and future operations at ACO's Oak Ridge, TN facilities that may continue through the term of this Agreement do not interfere with ACO or X-energy facilities and resources required to perform the Services under this Agreement.
4.16 Provide, pursuant to appropriate Task Orders, during the term of this Agreement:
4.16.1 All necessary equipment to perform the Task Orders contemplated under this Agreement, other than certain limited "specialty equipment" as set forth in each Task Order, such as, but not limited to: *****.
4.16.2 Support services required to perform the work for each Task Order under this Agreement.
4.16.3 Facility licensing, buildout and logistical support required to perform the Project Scope under this Agreement.
4.16.4 Existing and new equipment necessary to support the NCS analysis effort.
4.17 The obligations of ACO under this Agreement shall be performed fully within the United States, unless approved in writing in advance by X-energy, which approval shall not be unreasonably withheld or delayed.
4.18 Permit X-energy access to use and occupy the Premises. In connection with X-energy's access to the Premises, X-energy will be permitted to utilize such of the furniture, fixtures and furnishings and appurtenances as may be located therein or subsequently provided by ACO. ACO shall maintain and make all repairs to Premises; provided, however, X-energy shall be responsible for all structural and non-structural repairs, interior and exterior, in and to the Premises as a result of any repair or replacement necessitated by damage resulting from the gross negligence or willful misconduct of X-energy, as to which X-energy shall be solely responsible, and, in such event, X-energy shall promptly notify ACO of any repair or replacement necessitated by such damage. Any such repairs or replacements necessitated as a result of the gross negligence or willful misconduct of X-energy shall not be included as part of any "in-kind contributions" provided by ACO in connection with this Agreement. ACO shall provide the following utilities: HVAC, light, telephone, and security as currently postured. Except as otherwise specified in the prior sentence, ACO shall be under no obligation to provide any additional utilities and X-energy shall be responsible for the full cost of such utilities, which shall not be included as part of any "in-kind contributions" provided by ACO. These rights shall exist throughout the term of this Agreement.

## 5. X-energy Obligations. X-energy shall:

5.1 Cooperate in good faith with ACO in all matters relating to the services provided under this Agreement and in any Task Order.
5.2 Designate one of its employees to serve as its primary contact with respect to this Agreement and to act as its authorized representative with respect to matters pertaining to this Agreement (the " $X$-energy Contract Administrator"), with such designation to remain in force unless and until a successor X -energy Contract Administrator is appointed, in X-energy's discretion.
5.3 Designate one of its employees to serve as technical representative for each Task Order.
5.4 Ensure that the $X$-energy Contract Administrator responds promptly and accurately to any reasonable requests from ACO for instructions, information, or approvals required by ACO to provide the Services.
5.5 Provide certain "specialty equipment" needed to perform the work, as noted in Section 4.15.1.
5.6 Provide operations and maintenance support required to perform the work under this Agreement.
5.7 Promptly pay properly submitted and undisputed ACO invoices when due.
5.8 Comply with all applicable state, federal and local laws and regulations.
5.9 Follow all ACO rules when present in ACO-controlled areas of ACO facilities.

## 6. Fees and Expenses.

6.1 For the services to be performed hereunder, X-energy will pay to ACO a fee determined in accordance with the fee schedule set out in each Task Order. This fee may be structured as a fixed price fee or a time-and-materials based fee, or a blend between the two. The Task Orders shall include all information required to ensure that both parties agree on all components of the billing formula. Unless otherwise provided in the Task Order, undisputed fees will be payable within 30 days of receipt by X-energy of an invoice from ACO, accompanied by documentation reasonably requested by X -energy, in advance, evidencing all charges.
6.1.1 Where the Services are provided on a time and materials basis:
6.1.1.1 The fees payable for the Services shall be calculated in accordance with ACO's fee schedules for set forth in Exhibit E and the applicable Task Order; and
6.1.1.2 ACO shall issue invoices to $X$-energy monthly in arrears for its fees for time for the immediately preceding month, together with a detailed breakdown of any materials and expenses for such month.
6.1.2 Where the services are provided for a fixed price, the total fees for the services shall be the amount set out in the applicable Task Order. The total price shall be paid to ACO in installments, as set out in the Task Order, with each installment being conditioned upon ACO providing X-energy the deliverable or achieving the corresponding project milestone in respect of which an installment is due. ACO shall issue invoices to $X$-energy for the fees that are then payable.

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6.2 Within 30 days of receipt by X-energy of an invoice from ACO accompanied by receipts and supporting documentation reasonably acceptable to X-energy, X-energy shall reimburse ACO for all expenses reasonably incurred in accordance with the Task Order. All fees, expenses, and expense categories detailed in a Task Order shall be deemed pre-approved by X-energy upon approval of the Task Order by the X-energy Contract Administrator. All ACO expenses not pre-approved either separately or on the Task Order by the X-energy Contract Administrator, or not otherwise meeting the requirements of this Agreement or the Task Order to which it applies shall be reimbursed at the sole discretion of X-energy.
6.3 X-energy shall be responsible for all sales, use and excise taxes, and any other similar taxes, duties and charges of any kind imposed by any federal, state or local governmental entity on any amounts payable by X-energy hereunder; provided, that, in no event shall X-energy pay or be responsible for any taxes imposed on, or with respect to, ACO's income, revenues, gross receipts, personnel or real or personal property or other assets.
7. Change Orders
7.1 If either Party wishes to change the scope or performance of the work under a duly executed Task Order or this Agreement, it shall submit details of the requested change to the other Party's Contract Administrator in writing. ACO shall, within a reasonable time after receipt of X-energy's written request (and, if such request is initiated by X -energy not more than thirty (30) calendar days, or ten (10) calendar days if deemed an exigent change by X -energy) after receipt of X -energy's written request), provide a written estimate to $X$-energy of:
7.1.1 the likely time required to implement the change;
7.1.2 any necessary variations to the fees and other charges for the Services arising from the change;
7.1.3 the likely effect of the change on the Services; and
7.1.4 any other impact the change might have on the performance of this Agreement.
7.2 Promptly after receipt of the written estimate, the Parties shall negotiate in good faith and agree in writing on the terms of such change (a "Change Order"). Neither Party shall be bound by any Change Order unless mutually agreed upon in writing. A Change Order signed by X-energy and ACO indicates an agreement to the changes and/or the amount of an adjustment in the projected price, and/or adjustment in the schedule as reflected in such Change Order.
8. Disputes. Any dispute arising under or related to this Agreement or under any Task Order shall be resolved, to the maximum possible extent, through good faith negotiation between the Parties at the working level. If, after attempting to resolve a dispute at the working level, the Parties still cannot come to agreement, the issue will be presented to senior executives of each of the Parties, who also will work in good faith to resolve the dispute. If such senior executives fail to resolve the dispute, the Parties shall settle the dispute through binding arbitration administered by the [American Arbitration Association, under its Commercial Arbitration Rules. The number of arbitrators shall be three (3), and the place of arbitration shall be mutually agreed upon. Maryland law shall apply. Judgment on the award rendered by the arbitrators may be entered in any court having jurisdiction thereof.

## 9. Intellectual Property.

### 9.1 Definitions.

"Intellectual Property Rights" means any rights with respect to intellectual property in Information and includes, without limitation, as required by the context: patents, patent applications, and other patent rights; moral rights (to the extent possible according to applicable Law), copyrights, copyright registrations, and copyright rights (including, without limitation, copyrights, copyright registrations, and copyright rights with respect to computer software, firmware, programming tools, drawings, specifications, databases, and documentation); trade secrets, know-how, and other rights with respect to confidential or proprietary information; trademark, trade name, and similar rights; other rights with respect to Information; other intellectual and industrial property rights, whether or not subject to statutory registration or protection in any part of the world; the right to claim priority with respect to any of the foregoing rights; and all rights under any license or other arrangement with respect to the foregoing.
9.2 ACO assigns to X-energy ACO's entire right, title, and interest in any invention, technique, process, device, discovery, improvement, or know-how, whether patentable or not, hereafter made or conceived by ACO on or after the Effective Date of this Agreement while working for or on behalf of X-energy on any active Task Order, and depends on either:
9.2.1 ACO's knowledge of Confidential Information (as defined in Section 10) it obtains from X-energy.
9.2.2 The use of $X$-energy equipment, supplies, facilities, information, or materials.
9.3 ACO shall disclose any such invention, technique, process, device, discovery, improvement, or know-how promptly to the X -energy Contract Administrator.
9.4 ACO shall, upon request of X-energy, promptly execute a specific assignment of title to X-energy, and do anything else reasonably necessary to enable X-energy to secure for itself, patent, trade secret, or any other proprietary rights in the United States or other countries. It shall be conclusively presumed that any patent applications relating to a Task Order, related to trade secrets of X-energy, or which relate to tasks assigned to ACO by X-energy, which ACO may file within one year after termination of this Agreement, shall belong to $X$-energy, and ACO hereby assigns the same to $X$-energy, as having been conceived or reduced to practice during the term of this Agreement.
9.5 All writings or works of authorship, including, without limitation, program codes or documentation, produced or authored by ACO in the course of performing services for X-energy, together with any associated copyrights, are works made for hire and the exclusive property of X-energy. To the extent that any writings or works of authorship may not, by operation of law, be works made for hire, this Agreement shall constitute an irrevocable assignment by ACO to X-energy of the ownership of and all rights of copyright in, such items, and X-energy shall have the right to obtain and hold in its own name, rights of copyright, copyright registrations, and similar protections which may be available in the works. ACO shall provide X -energy or its designees all assistance reasonably required to perfect such rights.
9.6 ACO retains all Intellectual Property Rights, and rights to discoveries and improvements made or conceived prior to the Effective Date of this Agreement. Such Intellectual Property Rights, and rights to discoveries and improvements made or conceived by ACO before the Effective Date of this Agreement, are expressly reserved and excepted from the provisions of Section 9.
10. Confidentiality. The Parties entered into a non-disclosure agreement on May 5, 2017 as amended January 18, 2018 ("NDA") governing the definition and treatment of confidential information ("Confidential Information") between the Parties. The NDA is incorporated in its entirety and attached hereto as Exhibit G.

## 11. Representations and Warranties.

11.1 Each Party represents and warrants to the other Party that:
11.1.1 it is duly organized, validly existing and in good standing as a corporation or other entity as represented herein under the laws and regulations of its jurisdiction of incorporation, organization or chartering;
11.1.2 it has the full right, power and authority to enter into this Agreement, to grant the rights and any licenses granted hereunder and to perform its obligations hereunder;
11.1.3 the execution of this Agreement by its representative whose signature is set forth at the end hereof has been duly authorized by all necessary corporate action of the Party; and
11.1.4 when executed and delivered by such Party, this Agreement will constitute the legal, valid and binding obligation of such Party, enforceable against such Party in accordance with its terms.
11.2 ACO represents and warrants to $X$-energy that:
11.2.1 it shall perform the services under this Agreement and each duly executed Task Order using personnel of required skill, experience and qualifications and in a professional and workmanlike manner in accordance with best industry standards for similar services and shall devote adequate resources to meet its obligations under this Agreement;
11.2.2 to its knowledge, it is in compliance with, and shall perform all Services in compliance with, all applicable laws;
11.2.3 X-energy will receive good and valid title to all deliverables under any Task Order, free and clear of all encumbrances and liens of any kind, except for any ACO intellectual property;
11.2.4 none of ACO's services, deliverables and X-energy's use thereof (a) are known to infringe upon or will intentionally infringe any intellectual property right of any third party, and (b) as of the date hereof, there are no pending or, to ACO's knowledge, threatened claims, litigation or other proceedings pending against ACO by any third party based on an alleged violation of such
intellectual property rights, in each case, excluding any infringement or claim, litigation or other proceedings to the extent arising out of (i) any instruction, information, designs, specifications or other materials provided by X-energy to ACO, (ii) use of any deliverables in combination with any materials or equipment not supplied or specified by ACO, if the infringement would have been avoided by the use of the deliverables not so combined, and (iii) any modifications or changes made to the deliverables by or on behalf of any person other than ACO; and
11.2.5 the services and deliverables will conform in all material respects with all requirements or specifications stated in this Agreement and the applicable Task Order.
11.3 EXCEPT FOR THE EXPRESS WARRANTIES IN THIS AGREEMENT (A) EACH PARTY HEREBY DISCLAIMS ALL WARRANTIES; EITHER EXPRESS, IMPLIED, STATUTORY, OR OTHERWISE UNDER THIS AGREEMENT; AND (B) ACO SPECIFICALLY DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY, AND FITNESS FOR A PARTICULAR PURPOSE.
12. Non-Competition. ${ }^{* * * * *}$

## 13. Term, Termination, and Survival.

13.1 This Agreement shall commence as of the Effective Date and shall continue thereafter until the earlier of (i) completion of all Services required for Tasks issued according to Section 1 or (ii) June 30, 2021 (collectively, the "Term"), unless sooner terminated pursuant to this Section 13.
13.2 X-energy, in its sole discretion, may terminate this Agreement, or any Task Order issued hereunder, in whole or in part, at any time, without cause, and without liability except for required payment, if any, for services rendered, and reimbursement for authorized materials and expenses incurred, up to and on the termination date by providing at least 60 days prior written notice to ACO.
13.3 Either Party may terminate this Agreement for default, effective upon written notice to the other Party (the "Defaulting Party"), if the Defaulting Party:
13.3.1 Materially breaches this Agreement, and such breach is incapable of cure, or with respect to a material breach capable of cure, the Defaulting Party does not cure such breach within thirty [30] days after receipt of written notice of such breach.
13.3.2 Becomes insolvent or admits its inability to pay its debts generally as they become due.
13.3.3 Becomes subject, voluntarily or involuntarily, to any proceeding under any domestic or foreign bankruptcy or insolvency law, which is not fully stayed within ten business days, or is not dismissed or vacated within 45 calendar days after filing.
13.3.4 Is dissolved or liquidated or takes any corporate action for such purpose.
13.3.5 Makes a general assignment for the benefit of creditors.
13.3.6 Has a receiver, trustee, custodian, or similar agent appointed by order of any court of competent jurisdiction to take charge of or sell any material portion of its property or business.

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13.4 Subject to any and all DOE rights and obligations, upon expiration or termination of this Agreement for any reason, ACO shall promptly:
13.4.1 Deliver to X-energy all documents, work product, and other materials, whether or not complete, prepared by or on behalf of ACO in the course of performing the Services for which X-energy has paid.
13.4.2 Return to X-energy all X-energy-owned property, equipment, or materials in its possession or control.
13.4.3 Remove any ACO-owned property, equipment, or materials located in X-energy's facilities.
13.4.4 Deliver to $X$-energy, all documents and tangible materials (and any copies) containing, reflecting, incorporating, or based on X-energy's Confidential Information.
13.4.5 Provide reasonable cooperation and assistance to X-energy in transitioning the Services to an alternate service provider. Other than in a termination for cause due to a ACO default, ACO shall be reimbursed it's actual costs in facilitating the transition of the service to an alternate provider.
13.4.6 On a pro rata basis, repay all fees and expenses paid in advance for any Services which have not been provided.
13.4.7 Destroy X-energy's Confidential Information from its computer systems, provided, however, ACO shall not, in connection with the foregoing obligations, be required to identify or delete X-energy's Confidential Information held electronically in archive or back-up systems in accordance with general systems archiving or backup policies; however, in the event of a system restore, all X-energy Confidential Information shall be destroyed. ACO shall not be obligated to return or destroy X-energy's Confidential Information to the extent ACO is required to retain a copy pursuant to applicable law.
13.4.8 Certify in writing to $X$-energy that it has complied with the requirements of Section 13.
13.4.9 Deliver to X-energy all documents, work product, and other materials, whether or not complete, prepared by or on behalf of ACO in the course of performing the Services for which X-energy has paid.
13.5 Subject to any and all DOE rights and obligations, upon expiration or termination of this Agreement for any reason, X-energy shall promptly:
13.5.1 Return to ACO all ACO-owned property, equipment, or materials in its possession or control.
13.5.2 Remove any X-energy-owned property, equipment, or materials located in ACO's facilities.
13.5.3 Deliver to ACO, all documents and tangible materials (and any copies) containing, reflecting, incorporating, or based on ACO's Confidential Information, excluding any work product in which ACO's Confidential Information has been incorporated.
13.5.4 On a pro rata basis, repay all fees and expenses paid in advance for any Services which have not been provided.
13.5.5 Destroy ACO's Confidential Information from its computer systems, provided, however, ACO shall not, in connection with the foregoing obligations, be required to identify or delete X-energy's Confidential Information held electronically in archive or back-up systems in accordance with general systems archiving or backup policies; however, in the event of a system restore, all ACO's Confidential Information shall be destroyed. ACO shall not be obligated to return or destroy X-energy's Confidential Information to the extent ACO is required to retain a copy pursuant to applicable law.
13.5.6 Certify in writing to ACO that it has complied with the requirements of Section 13.
13.6 If X-energy, due to ACO's default, terminates this Agreement or any Task Order, in whole or in part, it may reasonably acquire, under commercially reasonable terms, supplies or services similar to those terminated. ACO will be responsible for the excess non-recurring costs incurred by X -energy to complete the deliverables specified in the Task Order that ACO was responsible for fulfilling, provided, such costs do not exceed the remaining value of the Task Order. For the avoidance of doubt, notwithstanding the prior sentence, under no circumstances shall ACO be responsible for reimbursing X-energy for any ongoing or recurring costs or expenses, including, but not limited to, rent and utilities. ACO shall, however, continue any work not so terminated. For the avoidance of doubt, in the event the Agreement is terminated pursuant to Section $34, A C O$ shall have no responsibility to $X$-energy under this Section 13.6.
13.7 The rights and obligations of the Parties set forth in this Section 13.6 and Sections 4.11, 8-12, 13.4, 13.5, $15-19,24,26$, and $29-32$, and any right or obligation of the Parties in this Agreement which, by its nature, should survive termination or expiration of this Agreement, will survive any such termination or expiration of this Agreement, and with respect to Confidential Information that constitutes a trade secret under applicable law, the rights and obligations set forth in Section 10 and the Confidentiality Agreement referenced therein, will survive such termination or expiration of this Agreement until, if ever, such Confidential Information loses its trade secret protection other than due to an act or omission of ACO or its affiliates and its or their employees, officers, directors, shareholder, partners, members, managers, agents, independent contractors, service providers, sublicensees, subcontractors, attorneys, accountants, and financial advisors.
14. Independent Contractor
14.1 It is understood and acknowledged that ACO will provide the Services herein to $X$-energy in the capacity of an independent contractor and not as an employee or agent of X-energy. ACO shall control the conditions, time, details, and means by which ACO performs the Services. X-energy shall have the right to inspect the work of ACO as it progresses solely for the purpose of determining whether the work is completed according to the terms within the applicable Task Order.
14.2 Neither Party has authority to commit, act for or on behalf of the other Party, or to bind the other Party to any obligation or liability.
14.3 ACO shall not be eligible for and shall not receive any employee benefits from X-energy and shall be solely responsible for the payment of all taxes, FICA, federal and state unemployment insurance contributions, state disability premiums, and all similar taxes and fees relating to its employees.
15. Indemnification.
15.1 ACO shall defend, indemnify and hold harmless X-energy and X-energy's affiliates and their officers, directors, employees, agents, successors and permitted assigns (each, an "X-energy Indemnitee") from and against all Losses arising out of or resulting from any third-party claim, suit, action or proceeding (each, an "Action") arising out of or resulting from:
15.1.1 bodily injury, death of any person or damage to real or tangible, personal property resulting from the willful, fraudulent or grossly negligent acts or omissions of ACO or its subcontractors in performance of the service; and
15.1.2 ACO's material breach of any ACO representation, warranty or obligation set forth in this Agreement.
15.2 ACO shall defend, indemnify and hold harmless the X-energy Indemnitees from and against all losses based on a claim that any of the services or deliverables or X-energy's receipt or use thereof infringes any intellectual property right of a third party; provided, however, that ACO shall have no obligations under this Section 15.2 with respect to claims to the extent arising out of:
15.2.1 any X -energy materials or any instruction, information, designs, specifications or other materials provided by X-energy to ACO;
15.2.2 use of deliverables in combination with any materials or equipment not supplied to $X$-energy or specified by ACO in writing, if the infringement would have been avoided by the use of the deliverables not so combined; or
15.2.3 any modifications or changes made to the deliverables by or on behalf of any person other than ACO or its subcontractors.
15.3 X-energy shall defend, indemnify and hold harmless ACO, ACO' affiliates, ACO subcontractors and their officers, directors, employees, agents, successors and permitted assigns (each a "ACO Indemnitee") from and against all losses arising out of or resulting from any third-party claim arising out of or resulting from:
15.3.1 bodily injury, death of any person or damage to real or tangible, personal property resulting from the willful, fraudulent or grossly negligent acts or omissions of X-energy, it's agents, or its affiliates; and
15.3.2 X-energy's material breach of any X-energy representation, warranty or obligation in this Agreement
15.4 X-energy shall defend, indemnify and hold harmless the ACO Indemnitees from and against all losses based on a claim that any of the services or deliverables or ACO's receipt or use thereof infringes any intellectual property right of a third party; provided, however, that X -energy shall have no obligations under this Section 15.4 with respect to claims to the extent arising out of:
15.4.1 any ACO materials or any instruction, information, designs, specifications or other materials provided by ACO to X-energy;
15.4.2 use of deliverables in combination with any materials or equipment not supplied to ACO or specified by X-energy in writing, if the infringement would have been avoided by the use of the deliverables not so combined; or
15.4.3 any modifications or changes made to the deliverables by or on behalf of any person other than X-energy or its subcontractors.
15.5 The Party seeking indemnification hereunder shall promptly notify the indemnifying party in writing of any claim or action and cooperate with the indemnifying party at the indemnifying party's sole cost and expense. The indemnifying party shall immediately take control of the defense and investigation of such claim or action and shall employ counsel of its choice to handle and defend the same, at the indemnifying party's sole cost and expense. The indemnifying party shall not settle any claim or action in a manner that adversely affects the rights of the indemnified party without the indemnified party's prior written consent, which shall not be unreasonably withheld or delayed. The indemnified party's failure to perform any obligations under this Section 15.4 shall not relieve the indemnifying party of its obligations under this Section 15.4 except to the extent that the indemnifying party can demonstrate that it has been materially prejudiced as a result of such failure. The indemnified party may participate in and observe the proceedings at its own cost and expense.
16. LIMITATION OF LIABILITY.
16.1 EXCEPT AS OTHERWISE PROVIDED IN SECTION 16.3, IN NO EVENT WILL EITHER PARTY BE LIABLE TO THE OTHER FOR ANY LOSS OF USE, REVENUE OR PROFIT OR LOSS OF DATA OR FOR ANY CONSEQUENTIAL, INCIDENTAL, INDIRECT, EXEMPLARY, SPECIAL OR PUNITIVE DAMAGES WHETHER ARISING OUT OF BREACH OF CONTRACT, TORT (INCLUDING NEGLIGENCE) OR OTHERWISE, REGARDLESS OF WHETHER SUCH DAMAGE WAS FORESEEABLE AND WHETHER OR NOT SUCH PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.
16.2 EXCEPT AS OTHERWISE PROVIDED IN SECTION 16.3, IN NO EVENT WILL EITHER PARTY'S LIABILITY ARISING OUT OF OR RELATED TO THIS AGREEMENT, WHETHER ARISING OUT OF OR RELATED TO BREACH OF CONTRACT, TORT (INCLUDING NEGLIGENCE) OR OTHERWISE, EXCEED TWO (2) TIMES THE AGGREGATE AMOUNTS PAID OR PAYABLE TO ACO PURSUANT TO THIS AGREEMENT AND ANY APPLICABLE STATEMENT OF WORK.
16.3 The exclusions and limitations in Section 16.1 and Section 16.2 shall not apply to:
16.3.1 damages or other liabilities arising out of or relating to a Party's gross negligence or willful misconduct that results in its failure to comply with its obligations under Section 9 (Intellectual

Property);
16.3.2 damages or other liabilities arising out of or relating to a Party's gross negligence or willful misconduct that results in its failure to comply with its obligations under Section 10 (Confidentiality);
16.3.3 a Party's indemnification obligations under Section 15 (Indemnification);
16.3.4 damages or other liabilities arising out of or relating to a Party's gross negligence, willful misconduct or intentional acts;
16.3.5 death or bodily injury or damage to real or tangible personal property resulting from a Party's negligent acts or omissions; and
16.3.6 damages or liabilities in excess of the cap provided for in Section 16.2 to the extent such excess is covered by a Party's insurance.

## 17. Remedies.

17.1 If a Party violates any material provision of this Agreement, the other Party shall, in addition to any damages to which it is entitled, be entitled to immediate injunctive relief against the offending Party, prohibiting further actions inconsistent with such offending Party's obligations under this Agreement.
17.2 To the extent a Party is required to seek enforcement of this Agreement or otherwise defend against an unsuccessful claim of breach, each Party shall be responsible for their respective attorney's fees and.
17.3 Each Party acknowledges that a breach by a Party of Section 9 (Intellectual Property) or Section 10 (Confidentiality) may cause the non-breaching Party irreparable damages, for which an award of damages would not be adequate compensation and agrees that, in the event of such breach or threatened breach, the non-breaching party will be entitled to seek equitable relief, including a restraining order, injunctive relief, specific performance and any other relief that may be available from any court, in addition to any other remedy to which the non-breaching party may be entitled at law or in equity. Such remedies shall not be deemed to be exclusive but shall be in addition to all other remedies available at law or in equity, subject to any express exclusions or limitations in this Agreement to the contrary. Neither party shall be required to secure or post bond.
17.4 All rights and remedies provided in this Agreement are cumulative and not exclusive, and the exercise by either Party of any right or remedy does not preclude the exercise of any other rights or remedies that may now or subsequently be available at law, in equity, by statute, in any other agreement between the Parties, or otherwise. Despite the previous sentence, the Parties intend that ACO's exclusive remedy for X-energy's payment breach shall be its right to damages equal to its earned but unpaid fees plus reasonable costs, including reasonable attorney's fees, incurred by ACO in seeking to remedy such breach.
18. Insurance.
18.1 At all times during the Term of this Agreement and for a period of three years thereafter, each Party (the "Insured Party") shall procure and maintain, at its sole cost and expense, at least the following types and amounts of insurance coverage:
18.1.1 Commercial General Liability with limits no less than \$1 Million per occurrence and \$1 Million in the aggregate, including bodily injury and property damage, which policy will include contractual liability coverage insuring the activities of such insured Party under this Agreement;
18.1.2 Worker's Compensation with limits required by applicable law;
18.1.3 Commercial Automobile Liability with limits no less than $\$ 1$ Million, combined single limit; and
18.2 All insurance policies required pursuant to Section 18.1 shall:
18.2.1 be issued by insurance companies reasonably acceptable to $X$-energy, with an A.M. Best's Rating of no less than A-VII;
18.2.2 provide that such insurance carriers give the other Party at least 30 days' prior written notice of cancellation or non-renewal of policy coverage; provided that, prior to such cancellation, the insured Party shall have new insurance policies in place that meet the requirements of this Section 18.2;
18.2.3 waive any right of subrogation of the insurers against the other Party.
18.2.4 provide that such insurance be primary insurance and any similar insurance in the name of and/or for the benefit of the other Party shall be excess and non-contributory; and
18.2.5 name the other Party and the other Party's affiliates, including, in each case, all successors and permitted assigns, as additional insureds.
18.3 Upon the written request of the other Party, the insured Party shall provide the other Party with copies of the certificates of insurance and policy endorsements for all insurance coverage required by Section 18.1, and shall not do anything to invalidate such insurance. This Section 18.3 shall not be construed in any manner as waiving, restricting or limiting the liability of either Party for any obligations imposed under this Agreement (including but not limited to, any provisions requiring a Party hereto to indemnify, defend and hold the other harmless under this Agreement).
19. Non-Solicitation. During the Term of this Agreement, and for a period of twelve (12) months thereafter, neither Party shall, directly or indirectly, in any manner solicit or induce for employment any person who performed any work under this Agreement who is then in the employment of the other Party. A general advertisement or notice of a job listing or opening or other similar general publication of a job search or availability to fill employment positions, including on the internet, shall not be construed as a solicitation or inducement for the purposes of this Section 19, and the hiring of any such employees or independent contractor who freely responds thereto shall not be a breach of this Section 19.
20. Entire Agreement. This Agreement, including and together with any related exhibits, schedules, attachments, and appendices constitutes the entire agreement between the Parties with respect to provision of the Services discussed herein. In the event of any conflict between the terms and provisions of this Agreement and those of any schedule, Exhibit or Task Order, the following order of precedence shall govern: (a) first, this Agreement, exclusive of its Exhibits and schedules, but specifically including Exhibit D containing the DOE flow down provisions; (b) second, the applicable Task Order; and (c) third, any Exhibits and schedules to this Agreement; and (d) fourth, the Service Provider Proposal.
21. Notices. All notices, requests, consents, claims, demands, waivers, and other communications under this Agreement (each, a "Notice", and with the correlative meaning "Notify") must be in writing and addressed to the other Party at its address set forth below (or to such other address that the receiving Party may designate from time to time in accordance with this Section 21). Unless otherwise agreed herein, all Notices must be delivered by personal delivery, nationally recognized overnight courier, certified or registered mail (in each case, return receipt requested, postage prepaid), or by e-mail or other electronic transmission (with evidence that the recipient has received such e-mail electronic transmission). Except as otherwise provided in this Agreement, a Notice is effective only (a) upon receipt by the receiving Party; and (b) if the Party giving the Notice has complied with the requirements of this Section 21.

Notice to X-energy:
Dr. Peter Pappano
X-energy, LLC
7701 Greenbelt Road, Suite 320
Greenbelt, MD 20770
Phone Number: 301-841-8152
Email: ppappano@X-energy.com

## Notice to ACO:

With a copy to:
General Counsel
American Centrifuge Operating, LLC
6901 Rockledge Drive, Suite 800
Bethesda, MD 20817
22. Severability. If any term or provision of this Agreement is found by a court of competent jurisdiction to be invalid, illegal, or unenforceable, such invalidity, illegality, or unenforceability shall not affect any other term or provision of this Agreement or invalidate or render unenforceable such term or provision in any other jurisdiction; provided, however, that if any fundamental term or provision of this Agreement. Upon a determination that any term or provision is invalid, illegal, or unenforceable, the Parties shall negotiate in good faith to/the court may modify this Agreement to affect the original intent of the Parties as closely as possible in order that the transactions contemplated hereby be consummated as originally contemplated to
the greatest extent possible.
23. Amendments. No amendment to or modification of this Agreement will be effective unless it is in writing, identified as an amendment to or modification of this Agreement, and signed by an authorized representative of each Party.
24. Waiver. No waiver by any Party of any of the provisions of this Agreement shall be effective unless explicitly set forth in writing and signed by the Party so waiving. Except as otherwise set forth in this Agreement, no failure to exercise, or delay in exercising, any right, remedy, power, or privilege arising from this Agreement shall operate or be construed as a waiver thereof, nor shall any single or partial exercise of any right, remedy, power, or privilege hereunder preclude any other or further exercise thereof or the exercise of any other right, remedy, power, or privilege.
25. Assignment. Neither Party shall assign, transfer, delegate, or subcontract any of its rights or obligations under this Agreement without the prior written consent of the other Party, which shall not be unreasonably withheld. Any purported assignment or delegation in violation of this Section 25 shall be null and void. No assignment or delegation in violation of this Agreement shall relieve a Party of any of its obligations hereunder.
26. Successors and Assigns. This Agreement is binding on and inures to the benefit of the Parties and their respective successors and permitted assigns.
27. No Third-Party Beneficiaries. Other than the obligations to the U.S. Government by virtue of the Cooperative Agreement and DOE flow down requirements, this Agreement benefits solely the Parties and their respective successors and permitted assigns and nothing in this Agreement, express or implied, confers on any third party any legal or equitable right, benefit, or remedy of any nature whatsoever under or by reason of this Agreement.
28. Public Statements. Except as otherwise required to comply with any law, rule, regulation, or otherwise as directed by legal counsel, neither Party shall issue or release any announcement, statement, press release or other publicity or marketing materials relating to this Agreement, or otherwise use the other Party's trademarks, service marks, trade names, logos, symbols or brand names, in such instances, without the prior written consent of the other Party, which shall not be unreasonably withheld or delayed.
29. Interpretative Rules. For purposes of this Agreement, (a) the words "include," "includes" and "including" shall be deemed to be followed by the words "without limitation"; (b) the word "or" is not exclusive; and (c) the words "herein," "hereof," "hereby," "hereto" and "hereunder" refer to this Agreement as a whole. Unless the context otherwise requires, references herein: (i) to Sections, Schedules, Exhibits and Task Orders refer to the Sections of, and Schedules, Exhibits and Task Orders attached to this Agreement; (ii) to an agreement, instrument or other document means such agreement, instrument or other document as amended, supplemented and modified from time to time to the extent permitted by the provisions thereof and (iii) to a law means such law as amended from time to time and includes any successor legislation thereto and any regulations promulgated thereunder. This Agreement shall be construed without regard to any presumption or rule requiring construction or interpretation against the Party drafting an instrument or causing any instrument to be drafted. Schedules, Exhibits and Task Orders referred to herein shall be construed with, and as an integral part of, this Agreement to the same extent as if they were set forth

> X Energy, LLC

7701 Greenbelt Road, Suite 320, Greenbelt, MD 20770
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verbatim herein. The headings in this Agreement are for reference only and shall not affect the interpretation of this Agreement.
30. Choice of Law. This Agreement and all related documents, and all matters arising out of or relating to this Agreement, whether sounding in contract, tort, or statute are governed by, and construed in accordance with, the laws of the State of Maryland, United States of America, without giving effect to the conflict of laws provisions thereof to the extent such principles or rules would require or permit the application of the laws of any jurisdiction other than those of the State of Maryland.
31. Choice of Forum. Each Party irrevocably and unconditionally agrees that it will not commence any action, litigation, or proceeding of any kind whatsoever against the other Party in any way arising from or relating to this Agreement, including all exhibits, schedules, attachments, and appendices attached to this Agreement, and all contemplated transactions, in any forum other than the US District Court for the District of Maryland or, if such court does not have subject-matter jurisdiction, the courts of the State of Maryland, sitting in Prince George's County, and any appellate court from any thereof. Each Party irrevocably and unconditionally submits to the exclusive jurisdiction of such courts and agrees to bring any such action, litigation, or proceeding only in such courts. Each Party agrees that a final judgment in any such action, litigation, or proceeding is conclusive and may be enforced in other jurisdictions by suit on the judgment or in any other manner provided by law.
32. Waiver of Jury Trial. EACH PARTY ACKNOWLEDGES THAT ANY CONTROVERSY THAT MAY ARISE UNDER THIS AGREEMENT, INCLUDING EXHIBITS, SCHEDULES, ATTACHMENTS, AND APPENDICES ATTACHED TO THIS AGREEMENT, IS LIKELY TO INVOLVE COMPLICATED AND DIFFICULT ISSUES AND, THEREFORE, EACH SUCH PARTY IRREVOCABLY AND UNCONDITIONALLY WAIVES ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY IN RESPECT OF ANY LEGAL ACTION ARISING OUT OF OR RELATING TO THIS AGREEMENT, INCLUDING ANY EXHIBITS, SCHEDULES, ATTACHMENTS, OR APPENDICES ATTACHED TO THIS AGREEMENT, OR THE TRANSACTIONS CONTEMPLATED HEREBY.
33. Counterparts. This Agreement may be executed in counterparts, each of which is deemed an original, but all of which together are deemed to be one and the same agreement. Notwithstanding anything to the contrary in Section 15, a signed copy of this Agreement delivered by facsimile, email, or other means of electronic transmission is deemed to have the same legal effect as delivery of an original signed copy of this Agreement.
34. Force Majeure. Neither Party shall be liable or responsible to the other Party, nor be deemed to have defaulted under or breached this Agreement, except for an obligation to make payments to the other Party, for any failure or delay in fulfilling or performing any term of this Agreement, when and to the extent such failure or delay is caused by or results from acts beyond the impacted Party's control, including, without limitation, the following force majeure events ("Force Majeure Event"): acts of God, fires, floods, vandalism, sabotage, war, terrorist action, riot, civil commotion, rebellion, general labor stoppage, interruptions in telecommunications or utilities services, national or regional emergency, unexpected acts of any government, regulatory or any other competent authority or compliance with the enactment of any new/unforeseen law or governmental or regulatory order, rule, regulation or direction (each, a "Force Majeure Event"). For the avoidance of doubt, without a Force Majeure Event, a Party's financial inability to perform, changes in cost or availability of materials, components or services, market conditions, or
supplier actions or contract disputes will not constitute a Force Majeure Event, or excuse performance by a Party under this Section 34. As soon as reasonably practicable after the occurrence of a Force Majeure Event, the Party whose performance is to be affected by such potential Force Majeure Event shall provide prompt written notice of the anticipated duration of such Force Majeure Event. To the extent possible, a Party claiming Force Majeure shall diligently pursue all reasonable means to end the Force Majeure Event and ensure that the effects of any Force Majeure Event are minimized and resume full performance under this Agreement. In the event that the Force Majeure Event continues for a period of ninety (90) days following written notice given pursuant to this Section 34, either Party may terminate this Agreement upon thirty (30) days' notice. Notwithstanding anything to the contrary in this Agreement, in the event either Party delivers notice of termination of the Agreement in accordance with this Section 34, the terminating Party shall incur no additional obligations or penalties under this Agreement, to the other Party, except for any outstanding payment obligations.

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed as of the Effective Date by their respective officers thereunto duly authorized.

X-ENERGY LLC

By $/ s /$ Kim Lester
Name: Kim Lester
Title: Manager, Contracts \& Procurement

American Centrifuge Operating, LLC

By /s/Larry B. Cutlip
Name: Larry B. Cutlip
Title: SVP, Field Operations

Signature Page to X-Energy and ACO Service Agreement

# ACO PROPOSAL TO X-ENERGY DATED March 1, 2018 

See Attached.


## Overview

Centrus Energy Corp (Centrus) is pleased to submit this proposal to provide technical and resource support for development of key foundational information and tools to facilitate further design and licensing of your reactor fuel production facility. Our staff is well suited to support your on time and on budget project needs.

Objective
Our immediate objective is to provide analysis, research and technical products that will help chart and guide preparation for preliminary and detailed design of a TRISO fuel facility. . ${ }^{* * * *}$
***** Centrus desires to be a partner through the entire process and emerge with Xenergy as the world's leader in the nuclear fuel cycle.

Proposed Execution Strategy
Approach
Description of Project:
Task 1: Nuclear Criticality Safety

| Subtask 1 NCS Program and NCS Policies/Procedures |  |  |
| :--- | :--- | :---: |
| Description | ${ }^{* * * * *}$ |  |

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| Summary of Milestones/Deliverables |  |  |
| :---: | :---: | :---: |
| No*** | Deliverables | Month |
| No. |  | $* * * * *$ |
| $* * * * *$ | $* * * * *$ | $* * * * *$ |
| $* * * * *$ | $* * * * *$ | $* * * * *$ |
| $* * * * *$ | $* * * * *$ | $* * * * *$ |
| $* * * * *$ | $* * * * *$ | $* * * * *$ |
| $* * * * *$ | $* * * * *$ | $* * * * *$ |
| $* * * * *$ | $* * * * *$ |  |


| Subtask 2 Design and System Walkdowns |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Description |  | ***** |  |  |
| Summary of Milestones/Deliverables |  |  |  |  |
| No. |  |  | Deliverables | Month |
| ***** | *** |  |  | ***** |
| ***** | *** |  |  | ***** |
| ***** | *** |  |  | ***** |


| Subtask 3 Code and Workstation Development |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :---: | :---: |

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| Subtask 4 Parameter Studies |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Description |  | ***** |  |  |
| Summary of Milestones/Deliverables |  |  |  |  |
| No. |  |  | Deliverables | Month |
| ***** | **** |  |  | ***** |
| ***** | **** |  |  | ***** |
| ***** | **** |  |  | ***** |


| Subtask 5 CAAS Analysis |  |  |  |
| :---: | :---: | :---: | :---: |
| Description |  | ***** |  |
| Summary of Milestones/Deliverables |  |  |  |
| No. |  | Deliverables | Month |
| ***** | *** |  | ***** |
| ***** | *** |  | ***** |
| ***** | *** |  | ***** |

Task 2: Fresh Pebble Storage and Transport

| Subtask 1 Whitepaper Development |  |  |  |
| :---: | :---: | :---: | :---: |
| Description |  | ***** |  |
| Summary of Milestones/Deliverables |  |  |  |
| No. |  | Deliverables | Month |
| ***** | **** |  | ***** |
| ***** | **** |  | ***** |

Task 3: Pebble Fabrication Line Mock-up and Facility Protection

| Subtask 1 Whitepaper Development and Misc. Tasks |  |
| :--- | :--- | :--- |
| Description | ***** |

Period of Performance - The proposal is divided into two periods with two of the three tasks spanning each period as expressed above. The cost estimates are established for the periods March-June 2018 and July to December 2018

## Your Centrus Team

Centrus has a mature research, development, and manufacturing base in Oak Ridge, Tennessee, that can meet the needs of a wide variety of complex, demanding projects. The highly skilled and qualified team members listed below are just an example of those that will strive to deliver value to your project.

$$
\begin{array}{|c|c|c|c}
\text { Name/Role } & \text { Education/Certifications } & \text { Summary of Experience }
\end{array}
$$

| Name/Role | Education/Certifications | Summary of Experience |
| :---: | :---: | :---: |
| Mark McClure, PMP <br> ACO-OR Deputy Manager/Facility Operations Manger | BS, Engineering Physics, Murray State University PMP | As Facility Operations Manager at Centrus Energy Corporation, Mr. McClure serves as Deputy Site Manager for Oak Ridge Operations (which includes a nuclear test facility) and as Facility Operations Manager for the Technology and Manufacturing Center (TMC, Nuclear Manufacturing Operations). In these roles, he oversees maintenance and operation of the 440,000 sq. ft. TMC with more than $\$ 100 \mathrm{M}$ in manufacturing equipment. With roles in site management, maintenance, work control, quality, procurement, materials, licensing and regulatory interface, nuclear criticality safety operations, and transportation, and education and significant U.S. Navy nuclear training and operating experience, Mr . McClure brings the expertise and experience from more than 33 years in the nuclear industry to successfully manage facility design for the project. <br> Mr. McClure served in multiple senior management roles providing leadership and management at the Paducah Gaseous Diffusion Plant over 20 years. These roles spanned nuclear maintenance, operations, criticality safety, licensing, regulatory performance functions, planning, contracts, materials, and logistics. He managed transition from DOE to NRC oversight-with the plant ultimately proving to be a flagship fuel cycle facility in terms of performance and regulatory margin. Implemented NRC regulations and licensing documents including analysis, procedure flow down, regulatory controls, problem identification, corrective action, continuous improvement, and production. <br> Mr. McClure's 12 year Navy career included a tour as Chief Engineering Officer on board the nuclear fast-attack submarine USS Houston, responsible for the operation and maintenance of all ship systems, including the Nuclear Propulsion Plant. As Staff Officer, Joint Strategic Planning Staff, responsible for interpretation and application of the President's nuclear war planning guidance for all three legs of the strategic triad. Served as primary briefing officer for preparing the Commander in Chief, Strategic Air Command (CINCSAC) for congressional testimony. |


| Name/Role | Education/Certifications | Summary of Experience |
| :--- | :--- | :--- |
| Scott McKinney <br> Manager Program <br> Management | BS, Electrical Engineering, <br> University of Missouri-Rolla <br> PE <br> PMP | He previously served as the manager of <br> Technical Services at Centrus Energy Corp.'s. <br> American Centrifuge Plant in Piketon, Ohio. He <br> was responsible for overseeing design <br> engineering, system engineering, nuclear safety, <br> environmental, safety and health, and customer <br> order management. |
|  |  | Mr. McKinney was the Engineering Manager at <br> the Paducah Gaseous Diffusion Plant in Paducah <br> Kentucky and Portsmouth Gaseous Diffusion <br> Plant in Piketon Ohio. He has served on several <br> oversight committees including the Plant <br> Operational Review Committee, Safety Review <br> Committee and the University of Kentucky <br> School of Engineering Advisory Board. He began <br> his career as an electrical engineer at Paducah in <br> 1988 and was later promoted to engineering |
| project manager. He later served as a |  |  |
| regulatory engineer, was promoted to electrical |  |  |
| engineering manager and has also served as |  |  |
| system engineering manager as well as design |  |  |
| engineering manager. He is a licensed |  |  |
| professional engineer and a certified project |  |  |
| management professional. |  |  |


| Name/Role | Education/Certifications | Summary of Experience |
| :---: | :---: | :---: |
| Don Weber, PMP Project Manager | BS, Mechanical Engineering, Youngtown State | Mr . Weber has over 25 years of experience with both project and plant-support engineering activities. He has over eighteen years of managerial experience in design engineering including management of Mechanical, Process, Civil, Structural, Electrical and Instrumentation disciplines and over four years of managerial experience in System Engineering. <br> Mr. Weber has held a broad range of leadership roles in Nuclear Engineering, including Engineering manager at the Piketon Centrifuge Plant, and Manager of Design and Advanced Technology at the Portsmouth Gaseous Diffusion Plant. <br> As the Engineering Manager at the Piketon Centrifuge Plant, Mr. Weber was responsible for the design and providing technical support to the process and support systems for the demonstration facility and coordinating the design the Commercial Facility with the EPC contractor. <br> In his current assignment, he has successfully managed projects to improve the AC100 centrifuge and developed a configuration management system compliant with the requirements of ASME NQA-1. |
| Ben Jordan, PMP Manager, Manufacturing | MS, Mechanical Engineering, <br> MBA, <br> University of Tennessee- <br> Knoxville; <br> PMP | Mr. Jordan has over 20 years of experience with Manufacturing, Engineering, Operations Management, Research and Design, and Entrepreneurship. He has held several management positions with Centrus including Demonstration Facility Operations Manager, Operations Manager, Design Engineering and Analysis Manager. <br> In his current role as Manufacturing Manager, he is responsible for $\$ 50 \mathrm{M}+$ of precision manufacturing equipment, including precision CNC machine tools, as well as the associated inspection and certification equipment. Mr. Jordan is also currently responsible for business development. |


| Name/Role | Education/Certifications | Summary of Experience |
| :--- | :--- | :--- |
| Dr. Jeffery Cooper | BS, Physics, Bucknell <br> Manager <br> Engineering and <br> Machine <br> Technology Group <br> MS, Physics, Yale University <br> PhD, Experimental Nuclear <br> Physics, Yale University <br> PMP | Dr. Cooper is responsible for design and team <br> integration functions. He is also responsible for <br> value engineering activities, reliability <br> improvements, and the electrical and controls <br> design. His responsibilities include experimental <br> demonstration of the efficacy of design <br> solutions. |
|  |  | Prior to his role as Manager of Machine <br> Technology, Dr. Cooper managed the Machine <br> and Cascade Analysis group, which is <br> responsible for all aspects of the separation <br> performance of the AC100 gas centrifuge. Since <br> the gross revenue of an enrichment facility is <br> proportional to the separation performance, Dr. <br> Cooper's group focused on applying state of the <br> art computational fluid dynamics methods, and <br> a thorough understanding of the underlying <br> physics, to maximize the profitability of the <br> business. He was also responsible for the <br> cascade design and holds a patent disclosure |
| based on his work. Dr. Cooper has been |  |  |
| working on the American Centrifuge Project |  |  |
| since 2004. |  |  |

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| Name/Role | Education/Certifications | Summary of Experience |
| :---: | :---: | :---: |
| Mathew Stanke <br> Design <br> Engineering and <br> Analysis Manager | BS, Mechanical <br> Engineering, University of Wisconsin PMP | Mr. Stanke has been with Centrus since 2007 in increasingly responsible positions. He is currently responsible for managing a team of design and manufacturing engineers to achieve design solutions for large $\mathrm{UF}_{6}$ centrifuges, support equipment, manufacturing processes, and related systems. He is also the Design Authority for mechanical designs and supporting documentation as well as a subject matter expert in the areas of Casing, Lower Suspension Assembly, and Vacuum. Mr. Stanke leads the Human Performance Improvement Committing for Centrus in Oak Ridge. <br> He began as a Senior Engineer accountable for all aspects of key centrifuge components including design, manufacture, and operational support and leading and facilitating cross functional team meetings. He resolved issues while bringing two plants online and has created and implemented an integrated tiered design and manufacturing release project schedule as part of managing a multi-million-dollar project. He was promoted to Analysis Section Head in 2011 and managed a team of analysts to analytically model systems for thermal, stress/strain, and seismic conditions. In 2012, Mr. Stanke was promoted to Test Manager (and continues as the acting manager) managing a team of test engineers to execute testing on $40^{\prime}$ tall highly instrumented centrifuges which involves executing scheduled testing on budget, analyzing and interpreting data on normal and off normal operations, executing elevated risk testing of multi-million dollar systems He has expert level proficiency in Human Performance Improvement, Lean Manufacturing, and Root Cause Analysis. |


| Name/Role | Education/Certifications | Summary of Experience |
| :---: | :---: | :---: |
| Glenn Strausser Regulatory and Quality Manager | BS, Electrical Engineering, <br> Lehigh University <br> MBA, University of Phoenix <br> PMP, MoR, PMI OPM3 | Mr. Strausser has more than 25 years in quality, project, and program management leadership. He has served at Centrus Energy as the Director of Engineering, Procurement, and Construction and as the Director of Quality. Mr. Strausser served as project director and senior consultant at Siemens, where he provided expertise for Siemens business units worldwide. Prior to that he worked at Johnson Controls, where he was responsible for the company's large construction projects. Mr. Strausser has also served in numerous engineering, quality, and project management roles at a variety of Department of Energy nuclear facilities. <br> Mr. Strausser is considered an expert in organizational project, program, and portfolio management. He is currently a core team member developing a new standard for the Project Management Institute on Organizational Project Management, and served as a core team member for their Program Management Standard. He has presented on these topics at various venues in the United States and Europe. He has earned extensive Project and Program Management Certifications, including the Project Management Professional (PMP), Management of Risk (MoR), Advanced Practitioner and Instructor in Program Management, and was a certified PMI OPM3 Assessor and Consultant. He also has certifications from the American Society for Quality (ASQ) as a Quality Manager, Quality Engineer, Software Quality Engineer, Auditor, and a Six Sigma Black Belt. He has served on several local and state quality boards, and he has presented on project management and quality-related topics to global audiences. |

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| Name/Role | Education/Certifications | Summary of Experience |
| :---: | :---: | :---: |
| Scott Eagan <br> Manager, <br> Safeguards and <br> Security | BS, History, University of Tennessee at Martin MS, Intelligence Studies, American Military University, Charleston, West Virginia | Mr. Eagen has over 35 years of experience, ten with Centrus, in security and intelligence related fields to include Industrial Security, Counterintelligence (CI), Operational Security (OPSEC), Personnel Security, Information Security, and Security and Intelligence Training. He is a retired U.S. Army officer and veteran of the Global War on Terrorism with decades of intelligence and security management and staff experience at all levels to include the U.S. Army and Department of Defense Headquarters at the Pentagon. His last assignment on active duty before joining Centrus was at the U.S. Military Academy, West Point, New York where he was the deputy director of the Department of Military Instruction and advisor to the National Military Academy of Afghanistan. He joined Centrus after retiring from the United States Army. |
| Maurice Parks <br> Manager, ACM Security and ACOOR TMC Physical Security | BS, Organizational <br> Management, Tusculum College; <br> Associate of Business <br> Science degrees in Computer Science and Accounting; | Mr. Parks is a combat veteran retiring at the rank of Master Sergeant, after 20 years of service in the U.S. Marine Corps. <br> He is responsible for day to day physical security operations of the TMC. His additional duties and responsibilities include, but are not limited to, ACM Facility Security Officer (FSO); Technical Security; Visitor Control; development of procedures and security plans; the standing up and stand down of Strategic Suppliers facilities; and, coordinator of Protective Forces. Prior to joining Centrus, Mr. Parks served in various security positions in the Oak Ridge TN area. |


| Name/Role | Education/Certifications | Summary of Experience |
| :---: | :---: | :---: |
| Marty Karr | Manager, Packaging and Transportation <br> AS, Mechanical Engineering | Mr. Karr served six years in the Navy nuclear propulsion program as a technician performing operations, maintenance, and management tasks. <br> Mr. Karr has held numerous management roles with Centrus Energy over a 20 -year period. Some such roles have included management in Maintenance, Materials Management, and Packaging and Transportation. He has served on and currently serves on numerous industry and government panels, working groups, task forces, and committees both domestically and internationally. He is an active member and Centrus point of contact for the World Nuclear Transport Institute, U.S. Department of Energy Transportation Management Council and member of the Nuclear Energy Institute Transportation Task Force. He was called upon by government and his peers to be a committee Co-Chair for PATRAM 2013 and member of several other committees. <br> He currently oversees all packaging and transportation operations, programs, and licensing for Centrus and all its subsidiaries. Mr. Karr is well versed in the transport of dangerous goods and specializes in radioactive material transport and security. He holds certifications in the transport of dangerous goods, including radioactive materials, for ground, air, sea, and mixed waste. |


| Name/Role | Education/Certifications | Summary of Experience |
| :---: | :---: | :---: |
| Clint Gross <br> Senior NCS <br> Engineer <br> Paschal Solutions, Inc. | MS, Nuclear Engineering Univ of Missouri at Rolla <br> BS, Nuclear Engineering Univ of Missouri at Rolla | Mr. Gross has more than 25 years of nuclear engineering experience. He has extensive experience developing and implementing criticality safety evaluations at multiple facilities, including BWXT Lynchburg, Paducah Gaseous Diffusion Plant (PGDP), SILEX, and Y-12 National Security Complex. He provided nuclear engineering support at the Paducah Gaseous Diffusion Plant for more than 18 years where he developed NCS evaluations for nearly every fissile operation in the PGDP cascade, product withdrawal, autoclave facilities, equipment removal and decontamination. He is an expert in criticality safety code validation and has performed code validation at the PGDP and Nuclear Fuel Services (NFS). He is also an expert in shielding analyses and has performed CAAS modeling at PGDP, NFS, and the Y-12 National Security Complex. Mr. Gross has also developed the technical basis for non-destructive assay neutron and gamma measurements performed in support of NCS. He serves as the Validation Team Leader and member of current ANSI/ANS8.1 working group and Member of ANSI/ANS8.24 working group. Core competencies include NCS, shielding analysis, NDA technical basis, and criticality safety software validation. |

Pricing
This proposal is being offered as a time and materials type contract structured as follows:


Net In-Kind ****

Project Assumptions

1) Centrus will work with Xenergy to establish mutually acceptable terms and conditions.

## EXHIBIT B

## INITIAL TASK ORDERS RELATED TO AGREEMENT

KEY ELEMENTS OF SERVICES TO BE PROVIDED, PROJECT MILESTONES, TIMING REQUIREMENTS, COMPLETION STANDARDS, FEE SCHEDULES, ACCEPTANCE TESTING PROCEDURES, AND OTHER IMPORTANT ITEMS

See Attached.

TASK ORDER AUTHORIZATION
*****

IN WITNESS WHEREOF, the duly authorized representatives of the parties hereto have executed this Task Order Modification as of the day and year shown below.

*****
[Three pages redacted]

TASK ORDER AUTHORIZATION
*****

IN WITNESS WHEREOF, the duly authorized representatives of the parties hereto have executed this Task Order Modification as of the day and year shown below.

PRIME CONTRACTOR - X Energy LLC


Name: Kim Lester
Title: Contracts Manager
[Two pages redacted]

SUBCONTRACTOR - American Centrifuge Operating, LLD


Name: Lara B Coma



IN WITNESS WHEREOF, the duly authorized representatives of the parties hereto have executed this Task Order Modification as of the day and year shown below.

PRIME CONTRACTOR - X Energy LLC


Name: Kim Lester
Title: Contracts Manager

SUBCONTRACTOR - American Centrifuge Operating,


Tile: SiP, field operations
[Two pages redacted]

EXHIBITC
FAB 1 Floorplan
See Attached.
****

Exhibit C to X-Energy and ACO Service Agreement

## EXHIBIT D

## GENERAL FLOW DOWN REQUIREMENTS

## FOR SUPPLIERS UNDER SUPPLY CONTRACTS PAID WITH FEDERAL OR COST SHARE FUNDS

## UNDER DEPARTMENT OF ENERGY AWARD NO. DE-NE0008472

(EXCLUDING INTELLECTUAL PROPERTY PROVISIONS)

1. Supplier shall not purchase and charge the cost of real property or equipment to X-energy or attempt to contribute in kind such costs for performance under this Agreement unless X-energy has expressly approved the purchase in writing. All equipment purchased with federal or cost share funds under the above-referenced award (the "Award") is subject to the requirements of 2 C.F.R. § 200.313.
2. Any surplus supplies for which the cost is reimbursed by $X$-energy exceeding $\$ 5,000$ in total aggregate value acquired in connection with, but ultimately not needed for performance under this Agreement are subject to the requirements of 2 C.F.R. § 200.314 . At the conclusion of this Agreement, Supplier shall work with X-energy on the development of a disposition plan for such supplies that meets the requirements of 2 C.F.R. § 200.314.
3. No deliverables, reports or submittals that are to be provided to the U.S. Department of Energy (DOE) under this Agreement may contain any protected Personally Identifiable Information (PII). PII is any information maintained by the Supplier about an individual, including but not limited to, education, financial transactions, medical history and criminal or employment history, and information that can be used to distinguish or trace an individual's identity, such as his/her name, social security number, date and place of birth, mother's maiden name, biometric data, etc., and including any other personal information that is linked or linkable to a specific individual.
4. Supplier acknowledges that it is the sense of the Congress that, to the greatest extent practicable, all equipment and products purchased under the Award, should be American-made.
5. Supplier shall obtain prior X-energy approval for all subcontracts that will be directly charged to this Agreement in excess of $\$ 5$ million, including all options and/or material modifications thereto. Supplier shall notify X-energy of any anticipated subcontracts estimated at $\$ 5$ million or more, including all options and modifications.
6. Supplier may only charge costs under this Agreement that are reasonable in nature and amount for the work done. Costs must be ordinary and necessary in connection with the work performed and reflective of charges that would result from arm's length bargaining in a competitive business.
7. Upon request of X-energy or DOE, Supplier shall provide documentary support for its pricing of goods or services provided to X-energy under this Agreement. For ACO labor, documentary support shall be provided upon request to DOE.
8. Supplier shall maintain records related to its performance under this Agreement for not less than three years from final payment. Supplier agrees to cooperate with X-energy to provide DOE access to any records that are pertinent to this Agreement, in order to make audits, examinations, excerpts, transcripts and copies of such documents. This right also includes reasonable access to Supplier's personnel for the purpose of interview and discussion related to such documents.
9. Supplier certifies that neither it nor its principals are debarred or suspended from participating under any federal contract or financial assistance award by any department or agency of the U.S. Government. Prior to entering into any subcontract, Supplier shall confirm that its first-tier subcontractors are not excluded or disqualified from doing business with the Federal government.
10. Supplier shall not publish progress reports, results or summaries of technical work conducted under the DOE Cooperative Agreement without X-energy's prior written approval.
11. Supplier shall obtain any required permits and comply with all applicable federal, state, and municipal laws, codes, and regulations for work performed under this Agreement.
12. Supplier shall notify X-energy of any potentially National Security classifiable results originating from this Agreement.
13. Supplier shall notify X-energy prior to performing work under this Agreement outside of the United States or subcontracting work to be performed outside the United States.
14. Supplier is responsible for maintaining the integrity of research of any kind under this Agreement, including the prevention, detection, and remediation of research misconduct, and the conduct of inquiries, investigations, and adjudication of allegations of research misconduct.
15. Supplier is encouraged to use the metric system to the extent practicable and economically feasible.
16. With respect to the performance of any portion of the work under this Agreement that is to be performed at a DOE-owned or controlled site, Supplier agrees to comply with all applicable State and Federal Environmental, Safety \& Health (ES\&H) regulations and with all other applicable ES\&H requirements of the operator of such site. Prior to the performance of any work at a DOE-owned or controlled site, Supplier, in consultation with X-energy, shall contact the site facility manager for information on DOE and site-specific ES\&H requirements. The Supplier shall apply this provision to its subcontractors performing work at a DOE-owned or controlled site.
17. Upon request and with 20 days written notice, Supplier shall provide X-energy and DOE access to any real property or equipment purchased for the performance of this Agreement using federal or cost share funds for purposes of inventory.
18. Upon request and with 20 days written notice, Supplier shall provide $X$-energy and DOE access to its facilities to conduct a program audit, the reasonable cost of which shall be reimbursed by $X$-energy, which cost shall be discounted and the fair market value of such discount included as an in-kind contribution.
19. As applicable, Supplier shall clearly label any business confidential information it provides to $X$-energy or to DOE.
20. Before directly charging any costs to this Agreement related to participation in any conference, Supplier shall obtain X-energy's written confirmation that such conference is directly and programmatically related to the purpose of the Award.
21. Supplier agrees to cooperate with X-energy in the preparation of any reports required by DOE under X-energy's cooperative agreement that relate to work performed by Supplier under this Agreement. X-energy shall reimburse Supplier for its reasonable cost incurred supporting $X$-energy, which cost shall be discounted and the fair market value of such discount included as an in-kind contribution.
22. No federal or cost share funds provided to Supplier under this Agreement shall be expended, directly, or indirectly, to influence congressional action on any legislation or appropriations matters pending before Congress.

EXHIBITE
ATTACHMENT 1 TO ACO PROPOSAL TO X-ENERGY DATED March 1, 2018
See Attached.





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Contractor Rates

| Contractor | Hourly Rate | Contract House |  |
| :--- | :--- | :--- | :--- |
| DeShambault, Rob | $\$$ | $* * * * *$ | Rearden Technical Consultants |
| Sain, Richard | $\$$ | $* * * * *$ | Rearden Technical Consultants |
| Thompson, Barry | $\$$ | $* * * * *$ | Strata G |
| Toelle, Steve | $\$$ | $* * * * *$ | Theta Technologies Inc |
| Wagner, Harvey G | $\$$ | $* * * * *$ | Rearden Technical Consultants |

Reference Lists

| Types of Estimates | Types of Contract | Type of Customer | Project Manager | Month | Year | Rate Basis | Contingency \% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| N/A | N/A | N/A | TBD | January | ***** | Full Burdens (w/Piketon \& Cor | ***** |
| Budgetary Esimate / ROM | Fixed Price | Government | Cooper, Jeff | February | ***** | Oak Ridge Only | ***** |
| Response to RFP | Time \& Material | Commercial | Ford, Marty | March | ** |  | ***** |
|  | Cost Plus |  | Jones, Buddy | April | ***** |  | ***** |
|  | TBD |  | Jordan, Ben | May | ***** |  | **** |
|  |  |  | McClure, Mark | June | ***** |  | ***** |
|  |  |  | McKinney, Scott | July | ***** |  |  |
|  |  |  | Ooten, Ron | August | ***** |  |  |
|  |  |  | Stanke, Mat | September | ***** |  | ***** |
|  |  |  | Stinnett, Travis | October |  |  | ***** |
|  |  |  | Weber, Don | November |  |  | ***** |
|  |  |  | Whitcomb, Ryan Yates, Dennis | December |  |  | **** |

## Oak Ridge Leasing Comps

| Office Fab 1 | $\begin{gathered} \mathrm{SqFt} \\ * * * * * \end{gathered}$ | With Security Cost / SQ FT |  | Without Security Cost / SQ FT |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Mkt Rate | Annual Lease <br> \$ ***** | Mkt Rate \$***** | Annual Lease |
| Bay | ***** | \$ ***** | \$ ***** | \$***** | \$ ***** |
|  | ***** | \$ ***** | \$ ***** | \$***** | \$***** |
| Monthly |  |  | \$ ***** |  |  |
| Cost |  | \$ ***** | \$ ***** | \$ ***** | \$ ***** |
|  |  | With Security/Rad Cost / SQFT |  |  |  |
|  |  | Mkt Rate | Annual Lease |  |  |
| Office |  | \$ ***** | \$ ***** |  |  |
| Bay |  | \$ *****. | \$ ***** |  |  |
|  |  | \$ ***** | \$ ****** |  |  |
| Monthly |  |  | \$ ***** |  |  |
| Cost |  | \$ ***** | \$ ***** |  |  |


| Office Comps | Rate/Sq Ft |
| :--- | :--- |
| 103 Donner Dr | $\$ * * * * *$ |
| 667 Emery Valley | $\$ * * * * *$ |
| 111 Union Valley | $\$ * * * * *$ |
| 129 E Division Rd | $\$ * * * * *$ |
| 1093 Commerce Park | $\$ * * * * *$ |
| 104 Union Valley | $\$ * * * * *$ |
| Average | $\$ * * * * *$ |
|  |  |
| Industrial Comps | $\$ * * * * *$ |
| 115 Union Valley |  |
| Value of Security | $\$ * * * * *$ |
| SCIS cost | $\$ * * * * *$ |
| Rate/Sq Ft |  |
| Value of Rad Program |  |






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\end{gathered}
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Contractor Rates

| Contractor | Hourly Rate | Contract House |
| :--- | :--- | :--- |
|  | DeShambault, Rob | $\$ * * * * *$ |
| Rearden Technical Consultants |  |  |
| Sain, Richard | $\$ * * * * *$ | Rearden Technical Consultants |
| Thompson, Barry | $\$ * * * * *$ | Strata G |
| Toelle, Steve | $\$ * * * * *$ | Theta Technologies Inc |
| Wagner, Harvey G | $\$ * * * * *$ | Rearden Technical Consultants |

Reference Lists

| Types of Estimates | Types of Contract | Type of Customer | Project Manager | Month | Year | Rate Basis | Contingency \% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| N/A | N/A | N/A | TBD | January | ***** | Full Burdens (w/Piketon \& Corl | ***** |
| Budgetary Esimate / ROM | Fixed Price | Government | Cooper, Jeff | February | ***** | Oak Ridge Only | ***** |
| Response to RFP | Time \& Material | Commercial | Ford, Marty | March | ***** |  | ***** |
|  | Cost Plus |  | Jones, Buddy | April | ***** |  | ***** |
|  | TBD |  | Jordan, Ben | May | ***** |  | ***** |
|  |  |  | McClure, Mark | June | ***** |  | ***** |
|  |  |  | McKinney, Scott | July | ***** |  | ***** |
|  |  |  | Ooten, Ron | August | ***** |  | ***** |
|  |  |  | Stanke, Mat | September | ***** |  | ***** |
|  |  |  | Stinnett, Travis | October |  |  | ***** |
|  |  |  | Weber, Don | November |  |  | ***** |
|  |  |  | Whitcomb, Ryan Yates, Dennis | December |  |  | ***** |

## Oak Ridge Leasing Comps

| Office Fab 1 | SqFt ***** ***** | With Security Cost / SQFT |  | Without Security Cost / SQ FT |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Mkt Rate | Annual Lease | Mkt Rate |  | nual Lease |
|  |  | \$ ***** | \$ ***** | \$ ***** | \$ | ***** |
| Bay |  | \$ ***** | \$ ***** | S ***** | S | ***** |
|  | ***** | \$ ***** | \$ ***** | \$ ***** | \$ | ***** |
| Monthly |  |  | \$ ***** |  |  |  |
| Cost |  | \$***** | \$ ***** | \$ ***** | \$ | ***** |


| Office | Mkt Rate |  | Annual Lease |  |
| :---: | :---: | :---: | :---: | :---: |
|  | \$ | ***** | \$ | ***** |
| Bay | \$ | ***** | \$ | ***** |
|  | \$ | ***** | \$ | ***** |
| Monthly |  |  | \$ | ***** |
| Cost | \$ | ***** | \$ | ***** |


| Office Comps | Rate/Sq Ft <br> Ot**** |
| :--- | :--- |
| 103 Donner Dr | $\$ * * * * *$ |
| 667 Emery Valley | $\$ * * * * *$ |
| 111 Union Valley | $\$ * * * * *$ |
| 129 E Division Rd | $\$ * * * * *$ |
| 1093 Commerce Park | $\$ * * * * *$ |
| 104 Union Valley | $\$ * * * * *$ |
| Average |  |
| Industrial Comps | $\$ * * * * *$ |
| 115 Union Valley |  |
|  |  |
| Value of Security | $\$ * * * * *$ |
| SCIS cost | $\$ * * * * *$ |

Value of Rad Program

## EXHIBIT F

## Advanced Reactor Concept Cooperative Agreement No. DE-NE0008472

by and between X-Energy and the U.S. Department of Energy

Exhibit F to X -Energy and ACO Service Agreement

| ASSISTANCE AGREEMENT |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1. Award No. <br> DE-NE0008472 | 2. Modification No. |  | 3. Effective Date 07/01/2016 | $\begin{aligned} & \text { 4. CFDA No. } \\ & 81.121 \end{aligned}$ |  |
| 5. Awarded To <br> X ENERGY, LLC <br> Attn: MATTHEW YETMAN <br> 7701 GREENBELT RD STE 320 <br> GREENBELT MD 20770 | b. Sponsoring Office Office of Nuclear Energy |  |  |  | 7. Period of Performance <br> ***** <br> through <br> ***** |
| 8. Type of Agreement 9. Authority  <br> $\square$ Grant 31 U.S.C. <br> $\square$ Cooperative Agreement 10 U.S.C. <br> $\square$ Other   <br> $\square$ X   | $\begin{aligned} & \text { 9. Authority } \\ & 31 \text { U.S.C. } 6304 \\ & 10 \\ & \text { U.S.C. } 2358 \end{aligned}$ |  |  | 10. Purchase Request or Funding Document No. 16NE000309 |  |
| 11. Remittance Address <br> $X$ ENERGY, LLC <br> Attn: X ENERGY, LLC <br> 7701 GREENBELT RD STE 400 GREENBELT MD 20770 |  | 12. Total Amount Govt. Share: <br> Cost Share : <br> Total |  | 13. Funds Obligated This action: ***** <br> Total : * *** |  |
| 14. Principal Investigator <br> Dr. Peter J Pappano <br> 15. Progra <br> Brian <br> Phone: | 15. Program Manager 16. Administrator <br> Brian K. Robinson Idaho Operations <br> Phone: 301-903-5694 U.S. Department of Energy <br> Idaho Operations  <br> 1955 Fremont Avenue  <br> MS 1221  <br> Idaho Falls ID 83415  |  |  |  |  |
| ```17. Submit Payment Requests To OR for Idaho U.S. Department of Energy Oak Ridge Financial Service Center P.O. Box 6017 Oak Ridge TN 37831``` | ```18. Paying Office OR for Idaho U.S. Department of Energy Oak Ridge Financial Service Center P.O. Box 6017 Oak Ridge TN 37831``` |  |  | $\begin{aligned} & \text { 19. Submit Reports To } \\ & \text { See Reporting Checklist } \end{aligned}$ |  |
| 20. Accounting and Appropriation Data X-Energy |  |  |  |  |  |
| 21. Research Title and/or Description of Project <br> XE-100 PEBBLE BED SMALL MODULAR REACTOR: SOLVING CRITICAL CHALLENGES TO ENABLE THE XE-100 PEBBLE BED ADVANCED REACTOR CONCEPT |  |  |  |  |  |
| For the Recipient |  | For the United States of America |  |  |  |
| 22. Signature of Person Authorized to Sign |  | 25. Signature of Grants/Agreements Officer Signature on File File |  |  |  |
| 23. Name and Title | 24. Date Signed | 26. Name of Officer Heather J. Merrill |  |  | 27. Date Signed <br> 07/01/2016 |


| CONTINUATION SHEET | JATION SHEET REFERENCE NO. OF DOCUMENT BEING CONTINUED <br> DE-NE0008472 |  |  |  | $\begin{array}{\|cc\|} \hline \text { PAGE } & \text { OF } \\ 2 & \mid \end{array}$ | 3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| NAME OF OFFEROR OR CONTRACTOR <br> X ENERGY, LLC |  |  |  |  |  |  |
| ITEM NO. <br> (A) | $\begin{aligned} & \text { SUPPLIES/SERVICES } \\ & (\mathrm{B}) \end{aligned}$ | RUANTITY (C) | $\begin{array}{r} \text { UNit } \\ \hline \text { (D) } \\ \hline \end{array}$ | $\begin{aligned} & \text { UNIT PRICE } \\ & \text { (E) } \end{aligned}$ | AMOUNT (F) |  |
|  | DUNS Number: 078846872 <br> Statement of Objectives <br> Through this cooperative agreement, the U.S. Department of Energy (DOE) Office of Nuclear Energy seeks to progress the development of advanced reactor concepts with the potential of being demonstrated in the 2035 timeframe. The award shall support further development of the advanced reactor concept in the areas of safety, operations, and economics. The expected outcome of the award includes assessment feasibility questions, solving technical issues, addressing licensing challenges, and demonstrating the technical viability of the concepts features. <br> The Project Narrative, submitted with the Recipient's application, is incorporated herein by reference as part of the Statement of Project objectives. <br> This cooperative agreement includes ***** of support for Battelle Energy Alliance, LLC, M\&O contractor for the Idaho National Laboratory (INL) (see Attachment b3). This funding will be sent directly to INL through their prime contract with DOE upon approval or each budget period. <br> This cooperative agreement also includes ***** of support for UT-Battelle, LLC, M\&O contractor for Oak Ridge National Laboratory (ORNL) (see Attachment b3). This funding will be sent directly to ORNL through their prime contract with DOE upon approval of each budget period. <br> NOTE: COST SHARE AMOUNTS - The recipient's cost share must always be at least***** of the total Government contribution. <br> SPECIAL CONDITION: The recipient shall demonstrate implementation of its accounting and financial management system to ensure compliance with 2 CFR 200 requirements. Demonstration shall be completed by no later than Failure to meet the requirements may result in additional remedies being implemented under the award in accordance with 2 CFR 200.338. <br> Directly Incorporated Attachments: <br> Continued . . . <br> a. Special Terms and Conditions |  |  |  |  |  |



NONDISCLOSURE AGREEMENT BETWEEN X-ENERGY AND CENTRUS DATED MAY 5, 2017, AS AMENDED JANUARY 18, 2018

See Attached.

Exhibit G to X-Energy and ACO Service Agreement


## NONDISCLOSURE AGREEMENT

This Agreement, effective as of May 5, 2017 (the "Effective Date"), made by and between X Energy, LLC having a principal place of business at 7701 Greenbelt Road, Suite 320, Greenbelt, MD 20770 ("X Energy"), and Centrus Energy Corp. having a principal place of business at 6901 Rockledge Dr., Suite 800, Bethesda, MD 20817 ("Centrus Energy") (each referred to herein as a "Party").

It is anticipated that the disclosing Party (the "DISCLOSER") may from time to time disclose to the receiving Party (the "RECIPIENT") certain technical and/or business information which the DISCLOSER regards as proprietary and/or confidential. The purpose of this Agreement is to set forth the terms and conditions under which such information will be maintained in confidence by the RECIPIENT. In consideration of DISCLOSER entering into discussions with RECIPIENT about DISCLOSER potentially retaining RECIPIENT to perform services, RECIPIENT agrees as follows:

1. "Proprietary Information," as used herein, shall mean non-public technical and/or business information which is disclosed by the DISCLOSER to the RECIPIENT during the term of this Agreement and which DISCLOSER regards as proprietary and/or confidential.
2. DISCLOSER will mark any technical Proprietary Information that can be marked (such as in written form) with a "Proprietary," "Confidential," or similar legend. DISCLOSER will not mark any financial/business Proprietary Information because such information in written or other tangible form will be presumed to be proprietary and/or confidential. RECIPIENT will treat all technical or financial/business information disclosed in oral form by DISCLOSER (such as during oral discussions) as Proprietary Information unless RECIPIENT confirms with DISCLOSER in writing that the information is not Proprietary Information.
3. RECIPIENT agrees that it shall retain such Proprietary Information in strict confidence, making no commercial uses of such Proprietary Information. The RECIPIENT agrees to use the same care and discretion as the RECIPIENT uses with respect to similar information of its own, but not less than reasonable care, to avoid unauthorized disclosure, publication, dissemination or use of Proprietary Information received hereunder.
4. The primary contact person for each Party, for the purpose of coordinating the flow of Proprietary Information, and for disclosure authorization, shall be:

## For: X Energy, LLC

Technical: Pete Pappano
Contractual: Kim Lester

For: Centrus Energy Corp.
Technical: Larry B Cutlip
Contractual: Larry B Cutlip
5. RECIPIENT covenants and agrees that it will receive and use the Proprietary Information only for the authorized uses identified by the DISCLOSER ("Authorized Uses").
6. RECIPIENT agrees that it shall not disclose Proprietary Information to any third party, except to those of RECIPIENT's employees (plus, employees of any parent, affiliate or subsidiary), directors, officers, managers, professional advisors (including, but not limited to, lawyers, bankers, financial consultants, and accountants), or creditors or guarantors (collectively, the "Representatives") who (i) have a bona fide need to know the Proprietary Information; (ii) are advised of the proprietary nature of the information; and (iii) except where such Representatives are U.S. government agencies, are bound, through a written agreement, to the terms of this Agreement or by a legally enforceable code of professional responsibility to protect the confidentiality of the Proprietary Information, without the express written authorization of an officer of the DISCLOSER. RECIPIENT further agrees that RECIPIENT will require each employee having access to Proprietary Information to agree to be bound by the terms of this Agreement prior to the disclosure of Proprietary Information to that employee. Notwithstanding the foregoing, In the event that a RECIPIENT is required by law, rule, regulation, legal process, court order, administrative demand or appropriate governmental authority to disclose the DISCLOSER'S Proprietary Information (whether on a confidential, privileged or other basis), the RECIPIENT shall, to the extent permitted by law, immediately notify the DISCLOSER and, upon request, cooperate with the DISCLOSER'S counsel to seek relief from the requested disclosure or to secure confidential treatment and minimization of the Proprietary Information to be disclosed. To the extent permitted by applicable law, the DISCLOSER shall have the right to take immediate possession of the Proprietary Information disclosed to RECIPIENT to revise such Proprietary Information to minimize its disclosure.
7. RECIPIENT shall not be responsible for disclosure of any Proprietary Information if such information (as supported by RECIPIENT's written records):
(i) Is or was publicly available at the time it was disclosed or is subsequently made available to the general public without restriction by the DISCLOSER or by disclosure by RECIPIENT in violation of this Agreement;
(ii) is furnished by the DISCLOSER to the U.S. Government with unlimited rights;
(iii) was known to or possessed by RECIPIENT at the time of disclosure;
(iv) was independently developed by RECIPIENT or RECIPIENT's employees or third parties;
(v) is used or disclosed with the prior written consent of the DISCLOSER; or
(vi) becomes known to RECIPIENT, on a non-confidential basis from a source other than DISCLOSER, without breach of an obligation of confidentiality or this Agreement by RECIPIENT.
8. The RECIPIENT shall only make such copies of the Proprietary Information as are reasonable and necessary in carrying out the Authorized Uses. Any such copies shall retain the proprietary markings, as applicable, from the original. The RECIPIENT shall promptly return or destroy all such copies to the DISCLOSER upon request, with the exception of one legal copy, which may be retained for archive purposes only. The RECIPIENT shall maintain the confidentiality of all Proprietary Information with regard to any copies.
9. Upon discovery of any inadvertent disclosure or use, the RECIPIENT shall notify DISCLOSER immediately and shall take all reasonable measures to prevent future inadvertent disclosure or use.
10. In the event of any breach of this Agreement, DISCLOSER may suffer irreparable harm and have no adequate remedy at law. In such event or the threat of any such event, DISCLOSER will be entitled to seek equitable relief, including but not limited to injunctive relief or specific performance, in addition to reasonable monetary damages, if any. The undersigned agree that the prevailing Party in any action brought to enforce the legal rights provided herein shall be entitled to full reimbursement of its costs (including reasonable attorneys' fees) in such action. RECIPIENT also agrees to waive any requirement for the securing or posting of any bond by the DISCLOSER in an action seeking such a remedy.
11. The protections afforded to the Confidential Information and Confidential Materials under this Agreement are in addition to, and not in lieu of, the protections afforded under any applicable trade secrets laws, including the Uniform Trade Secrets Act.
12. RECIPIENT acknowledges that this Agreement is subject to compliance with applicable United States laws, regulations, and/or orders. These laws, regulations, and orders include, but are not limited to, those that relate to
the export of nuclear materials, equipment, software, and technology, such as the U.S. Department of Energy ("DOE") regulations found in 10 C.F.R. Part 810, the U.S. Nuclear Regulatory Commission regulations in 10 C.F.R. Part 110, and the U.S. Department of Commerce's Export Administration Regulations found in 15 C.F.R. Part 730 et seq., as may be amended (collectively, "Export Control Laws").
(i) RECIPIENT agrees to comply with all Export Control Laws. RECIPIENT shall not export, reexport, transfer or retransfer, directly or indirectly, any Proprietary Information, except as permitted by such Export Control Laws.
(ii) Notwithstanding anything to the contrary in this Agreement, and in order to ensure compliance with Export Control Laws, RECIPIENT shall not, absent prior written approval by DISCLOSER:
a. use, directly or indirectly, Proprietary Information in any application involving a military use, missile technology, nuclear proliferation/nuclear explosive device, or chemical and biological weapons proliferation, and;
b. disclose or furnish Proprietary Information to any Foreign Nationals who are of a different nationality than the RECIPIENT (including RECIPIENT's employees who are of a different nationality than RECIPIENT, as applicable). For purposes of this paragraph, "Foreign National" means any person who is neither a U.S. citizen, a "Lawful Permanent Resident" (i.e., Green Card holder, 8 USC § 1101(a)(20)), nor other "Protected Individual" under the Immigration and Naturalization Act (8 USC $\S 1324 \mathrm{~b}(\mathrm{a})(3)$ ) designated an asylee, refugee, or a temporary resident under amnesty provisions. A Foreign National also means any foreign corporation, business association, partnership, or any other entity or group that is not incorporated to do business in the U.S. This restriction applies to written and oral information and guidance which may be provided by DISCLOSER and applies to any information provided by any contractor, or subcontractor to DISCLOSER or any other person acting on behalf of DISCLOSER.
(iii) All tangible objects, such as drawings, reports, programs or documents, which constitute and/or contains or may contain Export Controlled Information shall be marked "Export Controlled Information" or "Information Contained Within May Contain Export Controlled Information" or such other markings as required or permitted by DOE guidance. Markings inadvertently omitted from export controlled Proprietary Information when disclosed to a person or entity shall be applied by such person or entity promptly when requested by the DISCLOSER, and such export controlled Proprietary Information shall thereafter continue to be treated as export controlled information under the terms of this Agreement.
13. In accordance with the Defend Trade Secrets Act of 2016, any individual performing work for Centrus, whether as an individual, contractor or consultant, will not be held criminally or civilly liable under any federal or state trade secret law for the disclosure of a trade secret that: (a) is made (i) in confidence to a federal, state, or local government official, either directly or indirectly, or to an attorney; and (ii) solely for the purpose of reporting or investigating a suspected violation of law; or (b) is made in a complaint or other document that is filed under seal in a lawsuit or other proceeding. Further, if such an individual files a lawsuit for retaliation by an employer for reporting a suspected violation of law, he or she may disclose the employer's trade secrets to his or her attorney and use the trade secret information in the court proceeding if such individual: (x) files any document containing the trade secret under seal; and (y) does not disclose the trade secret, except pursuant to court order. Except to the extent notice of the foregoing immunities has already been given to such individuals, $X$ Energy shall notify its employees, contractors or employees receiving Proprietary Information under this Agreement, of such immunities.
14. These provisions are consistent with and do not supersede, conflict with, or otherwise alter the employee obligations, rights, or liabilities created by existing statute or Executive order relating to (1) classified information, (2) communications to Congress, (3) the reporting to an Inspector General of a violation of any law, rule, or regulation, or mismanagement, a gross waste of funds, an abuse of authority, or a substantial and specific danger to public
health or safety, or (4) any other whistleblower protection. The definitions, requirements, obligations, rights, sanctions, and liabilities created by controlling Executive orders and statutory provisions are incorporated into this agreement and are controlling.

The limitation above shall not contravene requirements applicable to Standard Form 312, Form 4414, or any other form issued by a Federal department or agency governing the nondisclosure of classified information. \{Note: This Paragraph added effective January 18, 2018\}
15. All notices to be given to either Party hereunder shall be sent to the following addresses:

If to $X$ Energy:
X Energy LLC
Address: 7701 Greenbelt Road, Suite 320
Greenbelt, MD 20770
ATTN: Kim Lester
Telephone: 301-658-2325
klester@x-energy.com
If to Centrus Energy:
Centrus Energy Corp
6901 Rockledge Drive, Suite 800
Bethesda, Maryland 20817-1867
ATTN: General Counsel
Telephone: (301) 564-3352
scottd@centrusenergy.com
Any notice, request, demand, claim or other communication related to this Agreement must be in writing. Notices shall be sufficient if delivered by hand, registered mail (return request requested), overnight courier or electronic mail. Notices shall be effective upon actual receipt thereof. The Party to whom notice is to be given may change the address for the giving of notices set forth above by delivering notice of such change to the other Party.
16. Nothing in this Agreement shall, by express grant, implication, estoppel or otherwise, create in the RECIPIENT any right, title, interest, or license in or to the inventions, patents, technical data, computer software, software documentation or other intellectual property of the DISCLOSER.
17. No waiver or modification of this Agreement will be binding upon either Party unless made in writing and signed by a duly authorized representative of such Party, and no failure or delay in enforcing any right will be deemed a waiver.
18. This Agreement shall be governed by the laws of the State of Maryland, without making reference to its conflicts of laws provisions.
19. RECIPIENT may not assign or otherwise transfer this Agreement or any of its rights and obligations hereunder to any third party, including to a legally recognized successor in interest to all or substantially all of the RECIPIENT's assets, without DISCLOSER's prior written consent, which consent will not be unreasonably withheld. This Agreement shall benefit and be binding upon the successors and assigns of the Parties hereto.
20. DISCLOSER warrants that it has the right to disclose the Proprietary Information for the purposes of this Agreement.
21. IN PROVIDING ANY PROPRIETARY INFORMATION HEREUNDER, DISCLOSER MAKES NO REPRESENTATION, EITHER EXPRESSED OR IMPLIED, AS TO THE INFORMATION'S ADEQUACY, ACCURACY, SUFFICIENCY OR FREEDOM FROM DEFECT OF ANY KIND, INCLUDING FREEDOM FROM ANY

PATENT INFRINGEMENT THAT MAY RESULT FROM THE USE OF SUCH PROPRIETARY INFORMATION, NOR SHALL DISCLOSER INCUR ANY RESPONSIBILITY OR OBLIGATION WHATSOEVER BY REASON OF SUCH PROPRIETARY INFORMATION, EXCEPT AS PROVIDED IN THIS AGREEMENT.
22. The Term of this Agreement will be two (2) years from the Effective Date. The Term can be extended if the Parties enter into a services contract that incorporates by reference this Agreement, in which case the Term of this Agreement will be the duration of that services contract.
23. RECIPIENT's obligations with respect to handling and protecting the Proprietary Information under this Agreement survive the Term of this Agreement.
24. If any term or provision of this Agreement is invalid, illegal or unenforceable in any jurisdiction, such invalidity, illegality or unenforceability shall not affect any other term or provision of this Agreement or invalidate or render unenforceable such term or provision in any other jurisdiction.
25. This Agreement contains the entire Agreement between the Parties concerning the subject matter hereof and supersedes any previous understandings, commitments or agreements, oral or written.
26. This Agreement may be executed in two (2) or more counterparts, each of which shall for all purposes be deemed an original and all of which shall constitute one and the same instrument and shall become effective when one or more counterparts, facsimiles or electronic signatures have been executed by each of the Parties and delivered to the other Party, it being understood that all Parties need not sign the same counterpart, facsimile or form of electronic signature. A signed copy of this Agreement delivered by facsimile, email or other means of electronic transmission shall be deemed to have the same legal effect as delivery of an original signed copy of this Agreement.
[Remainder of Page Intentionally Left Blank; Signature Page Follows on Next Page] ACO Energy Corp.

## AGREED:

For: X Energy, LLC

By: /s/ Kim Lester
Kim Lester
(Title) Contracts Manager
(Date) 1/18/2018

For: Centrus Energy Corp

By: /s/Dennis J. Scott
Dennis J. Scott
(Title) Senior Vice President, General Counsel, Chief Compliance Officer, and Corporate Secretary
(Date) January 18, 2018

## Reactor Competitors:

## *****

Fuel Supply Competitors:
*****

## CERTIFICATION OF CHIEF EXECUTIVE OFFICER

## I, Daniel B. Poneman, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Centrus Energy Corp.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting that are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

May 9, 2018
/s/ Daniel B. Poneman
Daniel B. Poneman
President and Chief Executive Officer

## CERTIFICATION OF CHIEF FINANCIAL OFFICER

I, Marian K. Davis, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Centrus Energy Corp.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting that are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

May 9, 2018
/s/ Marian K. Davis
Marian K. Davis
Senior Vice President, Chief Financial Officer and Treasurer

# CERTIFICATION OF CEO AND CFO PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO <br> SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002 

In connection with the quarterly report on Form 10-Q of Centrus Energy Corp. for the quarter ended March 31, 2018, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), pursuant to 18 U.S.C. § 1350, Daniel B. Poneman, President and Chief Executive Officer, and Marian K. Davis, Senior Vice President, Chief Financial Officer and Treasurer, each hereby certifies, that, to his knowledge:
(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of Centrus Energy Corp.

May 9, 2018
/s/ Daniel B. Poneman
Daniel B. Poneman
President and Chief Executive Officer

May 9, 2018
/s/ Marian K. Davis

## Marian K. Davis

Senior Vice President, Chief Financial Officer and Treasurer


[^0]:    ${ }^{(1)}$ Refer to Note 4 regarding cash, cash equivalents and restricted cash.

