State of Florida

# Public Service Commission

Capital Circle Office Center • 2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

**-M-E-M-O-R-A-N-D-U-M-**

**DATE:** November 17, 2009

**TO:** Office of Commission Clerk (Cole)

**FROM:** Division of Regulatory Analysis (Brown) SBM JM
Division of Economic Regulation (Lee) LB RA
Office of the General Counsel (Brubaker) JSB

**RE:** Docket No. 090371-EQ – Petition for approval of amended negotiated purchase power contract with Vision / FL, LLC by Progress Energy Florida.

**AGENDA:** 12/1/09 – Regular Agenda – Proposed Agency Action – Interested Persons May Participate

**COMMISSIONERS ASSIGNED:** All Commissioners

**PREHEARING OFFICER:** Administrative

**CRITICAL DATES:** None

**SPECIAL INSTRUCTIONS:** None

**FILE NAME AND LOCATION:** S:\PSC\SGA\WP\090371.RCM.DOC



## Case Background

Progress Energy Florida, Inc. (PEF) has an existing contract for the purchase of firm capacity with Vision / FL, LLC (Vision). The original contract between PEF and Vision was approved by the Commission in Order No. PSC-08-0707-PAA-EQ, issued October 23, 2008.[1] The original contract between PEF and Vision provides for Vision to construct and own a steam boiler power production generating facility located in Osceola County, Florida. The facility will generate approximately 40 megawatts (MW) of power with the use of a gasified sweet sorghum

[1] See Docket No. 080512-EQ, In re: Petition for approval of a negotiated purchase power contract for purchase of firm capacity and energy with Vision / FL, LLC, by Progress Energy Florida, Inc.

bagasse product as its primary fuel. The term of the original contract is January 1, 2010, through December 31, 2034.

On July 16, 2009, PEF filed a petition requesting approval of a modified negotiated purchase power contract with Vision. The modifications to the contract include: a change in the original estimated in-service date and term of the contract to January 1, 2011, through December 31, 2035, and a change in the pricing of the contract. PEF states that besides minor modifications in language and wording, all other aspects of the contract remain the same.

This recommendation addresses PEF's petition for approval of the amended negotiated contract with Vision. The Commission has jurisdiction over this matter pursuant to Sections 366.051, 366.81, and 366.91, Florida Statutes.

**Discussion of Issues**

**Issue 1**: Should the Commission approve the amended negotiated contract between Progress Energy Florida, Inc. (PEF) and Vision / FL, LLC (Vision), for the purchase of 40 MW of renewable firm capacity and energy?

**Recommendation**: Yes. Payments for energy are expected to produce savings between $28.6 and $70.2 million over the term of the contract compared to the original contract and PEF's current avoided cost. Upon a showing by PEF that expenses for the purchased power contract under the negotiated renewable energy contract were reasonable and prudently incurred, PEF should be permitted to recover those costs through the fuel clause. (Brown)

**Staff Analysis**: In November 2008, Vision requested a 120-day extension from PEF regarding the original project timelines. In December 2008, Vision followed up with a request for a 180 day extension of the project timelines. Vision stated that because of the nature of the current economy, it was having difficulty obtaining financing for its proposed project. In January 2009, Vision requested a cash price floor concept which was believed to assist in obtaining financing. In March 2009, the companies continued negotiations as Vision requested additional contract changes and alternate pricing concepts for PEF to consider. After the request, the parties discussed and agreed upon a fixed price. The two companies continued to negotiate through May 2009, when PEF received from Vision internal approvals of the contract amendments. The term of the original contract was valid beginning January 1, 2010, through December 31, 2034. PEF stated that it did not terminate the original agreement with Vision because, as mentioned above, Vision approached PEF before it had cause to terminate the contract. As a result of the new negotiations, the term of the contract was changed to January 1, 2011, through December 31, 2035.

The companies negotiated to include fixed energy payments instead of the fluctuating fuel forecasted payments from the original negotiated contract. In the analysis submitted by PEF, the fixed energy payments were lower than fluctuating energy payments each month over the life of the contract. As such, ratepayers should not be adversely affected unless the fluctuating energy payments become lower than the fixed energy payments. If this occurred, PEF would remain obligated to pay the contracted amount which could be recovered from ratepayers through the fuel costs recovery clause, subject to Commission review. Finally, other minor amendments were made to accommodate the necessary language changes in the contract as a result of the revisions. Other aspects of the contract contained in the original contract remained the same in the modified contract.

Rule 25-17.0832(3), Florida Administrative Code (F.A.C.), provides that in its review of a negotiated contract, the Commission must consider the following: the need for power, the cost-effectiveness of the contract, security provisions for capacity payments, and performance guarantees. Staff has evaluated each of these factors and provided a discussion below.

**A. Need for Power**

Rule 25-17.001(5)(d), F.A.C., encourages electric utilities to:

> Aggressively integrate nontraditional sources of power generation including cogenerators with high thermal efficiency and small power producers using renewable fuels into the various utility service areas near utility load centers to the extent cost effective and reliable.

The renewable facility is projected to have a maximum nominal capacity of 50 MW. After serving internal loads, the facility will provide firm capacity of approximately 40 MW of committed capacity to PEF. The expected total annual energy generated from the facility amounts to 311,853 MWH. In its 2009 Ten Year Site Plan, PEF identified a Suwannee Peaker Unit 4, a 178 MW Combustion Turbine (CT), as its avoided unit. The in-service date of the unit is identified as June 1, 2014. PEF's 2009 Ten Year Site Plan demonstrates that the company will not need any additional generating units to meet capacity needs through 2018. From a reserve margin standpoint, the addition of the Vision facility is not needed. The facility's in-service date is January 1, 2011. The reserve margin during that period is projected to be 22 percent, without the capacity from the Vision facility. In addition, the 2009 Ten Year Site Plan illustrates that the PEF is expected to shut down or place in stand-by less efficient generating units, while still maintaining a reserve margin over the 20 percent criterion. In the event of excess capacity, utilities are encouraged to sell any excess capacity not needed for generation. The capacity from the Vision facility could defer the addition of future units while also adding to PEF's fuel diversity.

**B. Cost-Effectiveness**

Traditional payments to qualified facilities (QFs) are divided into capacity and energy and are based on the cost of capacity and energy from the avoided unit. Under the original contract, PEF assumed a 2013 Suwannee County combined cycle (CC) unit as the avoided unit. The traditional payment for avoided capacity is a monthly payment in $/kilowatt-month. The traditional payment for energy costs is based on the forecasted energy price of the avoided unit in $/megawatt hours (MWh), but is adjusted as actual fuel costs become known. As mentioned previously, because of the current state of the economy, Vision was having difficulty obtaining financing for its project. In order to ease the complexity of finding finance, Vision approached PEF to change the fluctuating energy payment which was approved in the original contract, into a fixed energy payment. The terms of the contract calculate payments for avoided energy and capacity based on a projected committed capacity of 40 MW. In the contract, Vision's energy payment has been fixed and combined with the capacity payment; therefore, the contract rate includes both capacity and energy payments. Payments of this nature can encourage the development of renewable generation and provide a predictable revenue stream that removes the risk of fuel cost fluctuations. Removing the risk of fuel cost fluctuations does shift cost obligation to the ratepayer. PEF must show that expenses for purchased power are reasonable and prudently incurred as a provision to recovering those costs through the fuel clause. Staff believes the fuel forecasts assumed by PEF are reasonable. The fuel forecasts results showed that PEF's ratepayers would continue to experience annual savings over the term of the contract.

In the original contract, both the Vision facility and the 2013 Suwannee unit were modeled at 89 percent capacity factors for the capacity and energy payments. An analysis provided by PEF showed projected payments to Vision for the capacity and energy to be equal to avoided costs over the term of the contract. As a result, the original contract had no projected savings to ratepayers over the term of the contract. In the proposed modified contract, staff asked PEF to provide payment streams based on updated fuel forecasts using the 2008 standard offer contract and the 2009 standard offer contract. The 2008 standard offer contract was based on the 2013 Suwannee County CC. The 2009 standard offer contract was based on a 2014 Suwannee Peaker CT. The results showed that comparing the modified contract to the 2008 standard offer contract resulted in savings of $28.6 million over the life of the contract, compared to using the updated 2009 standard offer contract which revealed that PEF's customers could experience even higher savings up to $70.2 million. (See Attachment A)

Rule 25-17.240, F.A.C., encourages investor-owned utilities and renewable generating facilities to:

> ... negotiate contracts for the purchase of firm capacity and energy to avoid or defer construction of planned utility generating units and provide fuel diversity, fuel price stability and energy security.

As previously mentioned, the original contract projected no savings. The modified contract is expected to produce annual savings with cumulative total savings between $28.6 million to $70.2 million.

**C. Security for Capacity Payments**

Rule 25-17.0832(3)(c), F.A.C., requires the contract to include some form of security to provide for reimbursement to PEF in the event Vision defaults on the contract.

Upon Vision's request, the parties have agreed to extend the delivery of collateral from 60 days in the original contract to 90 days in the proposed modified contract. Within 90 days of the contract being executed, Vision must establish, fund, and deliver to PEF a performance security in the amount of at least $45,000 per MW of committed capacity. The required amount may be more dependent on Vision's credit rating and must be maintained through the first five years of the contract. In the event of termination, Vision must supply the termination fee through an unconditional, irrevocable, direct pay letter(s) of credit. The committed capacity amount has not changed from what was proposed in the original contract.

In the event of a contract termination after delivery of capacity, Vision will be responsible for termination fees. Once delivery of capacity reconvenes, the termination fee will be calculated monthly by PEF. Vision then must have letters of credit sufficient enough to cover the required balance.

Staff believes the security provisions contained in the contract are reasonable and will protect PEF's ratepayers in the event that Vision defaults from its obligation pertaining to the contract.

### D. Performance Guarantees

Pursuant to the contract, in order to receive full capacity payments, the Vision facility must have an Annual Capacity Billing Factor (ACBF) of 89 percent. Reduced capacity payments are due between 69 and 89 percent, and no capacity payment is due if the ACBF is less than 69 percent. If the capacity factor drops below 69 percent for 12 consecutive months, the contract may be terminated by PEF. These are the same performance guarantee conditions that were contained in the original contract between Vision and PEF. Finally, it should be noted that such performance guarantees of the Vision biomass facility are higher than that of a typical CT unit, which is normally around 10 percent.

In the event of default by either Vision or PEF, the non-defaulting party may terminate the agreement immediately upon written notice to the defaulting party. The contract describes events of default as pertaining to any of the following: payment default, inability to deliver, and misrepresentation.

Staff believes the performance provisions contained in the contract are reasonable and will protect PEF's ratepayers if Vision fails to deliver the firm capacity and energy as specified by the contract.

### E. Conclusion

Staff recommends that the contract between Vision and PEF be approved. The term of the modified contract will be January 1, 2011, through December 31, 2035. The modification of the Vision and PEF contract will change energy pricing from a floating price based on natural gas prices to a fixed price. PEF's analysis shows that the modified contract could save PEF's ratepayers between $28.6 million and $70.2 million. If the renewable generation cannot be delivered as stated in the contract, the contract contains security provisions and performance guarantees that would mitigate any risks to ratepayers. PEF must show that expenses for purchased power are reasonable and prudently incurred as a provision to recovering those costs through the fuel clause.

**Issue 2**: Should this docket be closed?

**Recommendation**: If no person whose substantial interests are affected files a protest within 21 days of the issuance of the Commission's order approving the petition and contract, this docket should be closed upon the issuance of a consummating order. (Brubaker)

**Staff Analysis**: If no person whose substantial interests are affected files a protest within 21 days of the issuance of the Commission's order approving the petition and contract, this docket should be closed upon the issuance of a consummating order.

REDACTED

**Table 1**
Comparison of Projected Payments
Vision Power Systems Revised Contract vs. 2008 Standard Offer Contract As Filed

| | |
|---|---|
| Discount Rate | 8.48% |
| Discount Date | 6/30/2009 |
| Capacity | 40 |
| Capacity Factor | 89% |

| | (1) | (2) | | | (3) | (4) | | | (5) | (6) | (7) (5) + (6) | (8) | (9) | (10) | (11) (9) + (10) | (12) | (13) (7)-(11) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | Negotiated Capacity Payments $/kW-mo. | Negotiated Energy Payments $/MWh | Delivery Voltage Adj. $/MWh | Total Negotiated Energy Payments $/MWh | SOC Capacity Payments $/kW-mo. | SOC Energy Payments $/MWh | Delivery Voltage Adj. $/MWh | Total SOC Energy Payments $/MWh | Negotiated Capacity Payments $000 | Negotiated Energy Payments $000 | Negotiated Total Payments $000 | Negotiated Total Payment $/MWh | SOC Capacity Payments $000 | SOC Energy Payments $000 | SOC Total Payments $000 | SOC Total Payment $/MWh | Difference Between Negotiated and SOC |
| 2009 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| 2010 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - |
| 2011 | [redacted] | | $ 1.21 | $ 58.53 | $ - | $ 66.59 | $ 1.41 | $ 68.00 | $ 3,996 | $ 18,250 | $ 22,246 | $ 71.34 | $ - | $ 21,205 | $ 21,205 | $ 68.00 | $ 1,041 |
| 2012 | [redacted] | | $ 1.21 | $ 58.53 | $ - | $ 63.38 | $ 1.34 | $ 64.72 | $ 4,152 | $ 18,300 | $ 22,452 | $ 71.80 | $ - | $ 20,237 | $ 20,237 | $ 64.72 | $ 2,216 |
| 2013 | [redacted] | | $ 1.21 | $ 58.53 | $ 10.70 | $ 60.48 | $ 1.28 | $ 61.75 | $ 4,320 | $ 18,250 | $ 22,570 | $ 72.37 | $ 2,996 | $ 19,258 | $ 22,254 | $ 71.36 | $ 316 |
| 2014 | [redacted] | | $ 1.21 | $ 58.53 | $ 11.10 | $ 63.24 | $ 1.33 | $ 64.58 | $ 4,500 | $ 18,250 | $ 22,750 | $ 72.95 | $ 5,328 | $ 20,139 | $ 25,467 | $ 81.66 | $ (2,717) |
| 2015 | [redacted] | | $ 1.21 | $ 58.53 | $ 11.55 | $ 66.23 | $ 1.40 | $ 67.63 | $ 4,680 | $ 18,250 | $ 22,930 | $ 73.53 | $ 5,544 | $ 21,091 | $ 26,635 | $ 85.41 | $ (3,705) |
| 2016 | [redacted] | | $ 1.21 | $ 58.53 | $ 12.00 | $ 62.98 | $ 1.33 | $ 64.30 | $ 4,872 | $ 18,300 | $ 23,172 | $ 74.10 | $ 5,760 | $ 20,109 | $ 25,869 | $ 82.72 | $ (2,697) |
| 2017 | [redacted] | | $ 1.21 | $ 58.53 | $ 12.48 | $ 59.24 | $ 1.25 | $ 60.49 | $ 5,064 | $ 18,250 | $ 23,314 | $ 74.76 | $ 5,988 | $ 18,864 | $ 24,852 | $ 79.69 | $ (1,538) |
| 2018 | [redacted] | | $ 1.21 | $ 58.53 | $ 12.95 | $ 60.57 | $ 1.28 | $ 61.84 | $ 6,268 | $ 18,250 | $ 23,518 | $ 75.41 | $ 6,216 | $ 19,287 | $ 25,503 | $ 81.78 | $ (1,985) |
| 2019 | [redacted] | | $ 1.21 | $ 58.53 | $ 13.45 | $ 61.94 | $ 1.31 | $ 63.24 | $ 5,484 | $ 18,250 | $ 23,734 | $ 76.11 | $ 6,456 | $ 19,722 | $ 26,178 | $ 83.95 | $ (2,444) |
| 2020 | [redacted] | | $ 1.21 | $ 58.53 | $ 13.98 | $ 63.32 | $ 1.34 | $ 64.66 | $ 5,700 | $ 18,300 | $ 24,000 | $ 76.75 | $ 6,708 | $ 20,220 | $ 26,928 | $ 86.11 | $ (2,928) |
| 2021 | [redacted] | | $ 1.21 | $ 58.53 | $ 14.53 | $ 64.75 | $ 1.37 | $ 66.12 | $ 5,940 | $ 18,250 | $ 24,190 | $ 77.57 | $ 6,972 | $ 20,620 | $ 27,592 | $ 88.48 | $ (3,402) |
| 2022 | [redacted] | | $ 1.21 | $ 58.53 | $ 15.10 | $ 66.20 | $ 1.40 | $ 67.60 | $ 6,180 | $ 18,250 | $ 24,430 | $ 78.34 | $ 7,248 | $ 21,082 | $ 28,330 | $ 90.84 | $ (3,900) |
| 2023 | [redacted] | | $ 1.21 | $ 58.53 | $ 15.70 | $ 87.70 | $ 1.43 | $ 69.13 | $ 6,420 | $ 18,250 | $ 24,670 | $ 79.11 | $ 7,536 | $ 21,558 | $ 29,094 | $ 93.30 | $ (4,424) |
| 2024 | [redacted] | | $ 1.21 | $ 58.53 | $ 16.30 | $ 69.22 | $ 1.46 | $ 70.68 | $ 6,684 | $ 18,300 | $ 24,984 | $ 79.90 | $ 7,824 | $ 22,103 | $ 29,927 | $ 95.70 | $ (4,943) |
| 2025 | [redacted] | | $ 1.21 | $ 58.53 | $ 16.96 | $ 70.78 | $ 1.49 | $ 72.27 | $ 6,948 | $ 18,250 | $ 25,198 | $ 80.80 | $ 8,136 | $ 22,537 | $ 30,673 | $ 98.36 | $ (5,475) |
| 2026 | [redacted] | | $ 1.21 | $ 58.53 | $ 17.60 | $ 72.37 | $ 1.53 | $ 73.90 | $ 7,224 | $ 18,250 | $ 25,474 | $ 81.69 | $ 8,448 | $ 23,046 | $ 31,494 | $ 100.99 | $ (6,020) |
| 2027 | [redacted] | | $ 1.21 | $ 58.53 | $ 18.30 | $ 74.00 | $ 1.56 | $ 75.58 | $ 7,524 | $ 18,250 | $ 25,774 | $ 82.65 | $ 8,784 | $ 23,565 | $ 32,349 | $ 103.73 | $ (6,575) |
| 2028 | [redacted] | | $ 1.21 | $ 58.53 | $ 19.03 | $ 75.66 | $ 1.60 | $ 77.26 | $ 7,824 | $ 18,300 | $ 26,124 | $ 83.54 | $ 9,132 | $ 24,160 | $ 33,292 | $ 106.46 | $ (7,168) |
| 2029 | [redacted] | | $ 1.21 | $ 58.53 | $ 19.78 | $ 77.37 | $ 1.63 | $ 79.00 | $ 8,136 | $ 18,250 | $ 26,386 | $ 84.61 | $ 9,492 | $ 24,637 | $ 34,129 | $ 109.44 | $ (7,743) |
| 2030 | [redacted] | | $ 1.21 | $ 58.53 | $ 20.55 | $ 79.12 | $ 1.67 | $ 80.79 | $ 8,460 | $ 18,250 | $ 26,710 | $ 85.65 | $ 9,864 | $ 25,194 | $ 35,058 | $ 112.42 | $ (8,348) |
| 2031 | [redacted] | | $ 1.21 | $ 58.53 | $ 21.35 | $ 80.90 | $ 1.71 | $ 82.60 | $ 8,796 | $ 18,250 | $ 27,046 | $ 86.73 | $ 10,248 | $ 25,760 | $ 36,008 | $ 115.47 | $ (8,962) |
| 2032 | [redacted] | | $ 1.21 | $ 58.53 | $ 22.18 | $ 82.71 | $ 1.75 | $ 84.46 | $ 9,156 | $ 18,300 | $ 27,456 | $ 87.80 | $ 10,644 | $ 26,411 | $ 37,055 | $ 118.50 | $ (9,599) |
| 2033 | [redacted] | | $ 1.21 | $ 58.53 | $ 23.05 | $ 84.58 | $ 1.78 | $ 86.36 | $ 9,516 | $ 18,250 | $ 27,766 | $ 89.04 | $ 11,064 | $ 26,932 | $ 37,996 | $ 121.84 | $ (10,230) |
| 2034 | [redacted] | | $ 1.21 | $ 58.53 | $ 23.98 | $ 86.48 | $ 1.82 | $ 88.30 | $ 9,900 | $ 18,250 | $ 28,150 | $ 90.27 | $ 11,508 | $ 27,537 | $ 39,045 | $ 125.20 | $ (10,895) |
| 2035 | [redacted] | | $ 1.21 | $ 58.53 | $ 24.90 | $ 88.42 | $ 1.87 | $ 90.29 | $ 10,296 | $ 18,250 | $ 28,546 | $ 91.54 | $ 11,952 | $ 28,157 | $ 40,109 | $ 128.61 | $ (11,563) |
| Total | | | | | | | | | $167,040 | $ 456,553 | $623,593 | | $183,848 | $563,431 | $747,279 | | $(123,686) |
| NPV | | | | | | | | | $ 53,686 | $ 172,486 | $226,172 | | $ 53,713 | $201,047 | $254,760 | | $ (28,588) |

REDACTED

**Table 4**

Comparison of Projected Payments

Vision Power Systems Revised Contract vs. 2009 Standard Offer Contract

| | |
|---|---|
| Discount rate | 8.48% |
| Discount Date | 6/30/2009 |
| Capacity | 40 |
| Capacity Factor | 89% |

| | (1) | (2) | | | (3) | (4) | | | (5) | (6) | (7) (5) + (6) | (8) | (9) | (10) | (11) (9) + (10) | (12) | (13) (7)-(11) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | Negotiated Capacity Payments $/kW-mo. | Negotiated Energy Payments $/MWh | Delivery Voltage Adj. $/MWh | Total Negotiated Energy Payments $/MWh | SOC Capacity Payments $/kW-mo. | SOC Energy Payments $/MWh | Delivery Voltage Adj. $/MWh | Total SOC Energy Payments $/MWh | Negotiated Capacity Payments $000 | Negotiated Energy Payments $000 | Negotiated Total Payments $000 | Negotiated Total Payment $/MWh | SOC Capacity Payments $000 | SOC Energy Payments $000 | SOC Total Payments $000 | SOC Total Payment $/MWh | Difference Between Negotiated and SOC |
| 2009 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | | $ - |
| 2010 | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | $ - | | $ - |
| 2011 | [redacted] | | $ 1.21 | $ 58.53 | $ - | $ 85.25 | $ 1.80 | $ 87.04 | $ 3,996 | $ 18,250 | $ 22,246 | $ 71.34 | $ - | $ 27,145 | $ 27,145 | $ 87.04 | $ (4,899) |
| 2012 | | | $ 1.21 | $ 58.53 | $ - | $ 77.34 | $ 1.63 | $ 78.98 | $ 4,152 | $ 18,300 | $ 22,452 | $ 71.80 | $ - | $ 24,696 | $ 24,696 | $ 78.98 | $ (2,244) |
| 2013 | | | $ 1.21 | $ 58.53 | $ - | $ 83.63 | $ 1.78 | $ 85.39 | $ 4,320 | $ 18,250 | $ 22,570 | $ 72.37 | $ - | $ 26,629 | $ 26,629 | $ 85.39 | $ (4,059) |
| 2014 | | | $ 1.21 | $ 58.53 | $ 9.55 | $ 82.12 | $ 1.73 | $ 83.85 | $ 4,500 | $ 18,250 | $ 22,750 | $ 72.95 | $ 2,674 | $ 26,148 | $ 28,822 | $ 92.42 | $ (6,072) |
| 2015 | | | $ 1.21 | $ 58.53 | $ 9.90 | $ 85.17 | $ 1.80 | $ 86.97 | $ 4,680 | $ 18,250 | $ 22,930 | $ 73.53 | $ 4,752 | $ 27,122 | $ 31,874 | $ 102.21 | $ (8,944) |
| 2016 | | | $ 1.21 | $ 58.53 | $ 10.30 | $ 79.32 | $ 1.67 | $ 80.99 | $ 4,872 | $ 18,300 | $ 23,172 | $ 74.10 | $ 4,944 | $ 25,327 | $ 30,271 | $ 96.80 | $ (7,099) |
| 2017 | | | $ 1.21 | $ 58.53 | $ 10.68 | $ 72.09 | $ 1.52 | $ 73.61 | $ 5,064 | $ 18,250 | $ 23,314 | $ 74.76 | $ 5,124 | $ 22,958 | $ 28,080 | $ 90.04 | $ (4,766) |
| 2018 | | | $ 1.21 | $ 58.53 | $ 11.10 | $ 72.33 | $ 1.53 | $ 73.86 | $ 5,268 | $ 18,250 | $ 23,518 | $ 75.41 | $ 5,328 | $ 23,032 | $ 28,360 | $ 90.94 | $ (4,842) |
| 2019 | | | $ 1.21 | $ 58.53 | $ 11.53 | $ 73.40 | $ 1.55 | $ 74.95 | $ 5,484 | $ 18,250 | $ 23,734 | $ 76.11 | $ 5,532 | $ 23,372 | $ 28,904 | $ 92.68 | $ (5,170) |
| 2020 | | | $ 1.21 | $ 58.53 | $ 11.95 | $ 74.98 | $ 1.58 | $ 76.56 | $ 5,700 | $ 18,300 | $ 24,000 | $ 76.75 | $ 5,736 | $ 23,941 | $ 29,677 | $ 94.90 | $ (5,677) |
| 2021 | | | $ 1.21 | $ 58.53 | $ 12.43 | $ 79.07 | $ 1.67 | $ 80.74 | $ 5,940 | $ 18,250 | $ 24,190 | $ 77.57 | $ 5,964 | $ 25,179 | $ 31,143 | $ 99.87 | $ (6,953) |
| 2022 | | | $ 1.21 | $ 58.53 | $ 12.90 | $ 81.75 | $ 1.72 | $ 83.48 | $ 6,180 | $ 18,250 | $ 24,430 | $ 78.34 | $ 6,192 | $ 26,033 | $ 32,225 | $ 103.33 | $ (7,795) |
| 2023 | | | $ 1.21 | $ 58.53 | $ 13.40 | $ 85.55 | $ 1.81 | $ 87.35 | $ 6,420 | $ 18,250 | $ 24,670 | $ 79.11 | $ 6,432 | $ 27,241 | $ 33,673 | $ 107.98 | $ (9,003) |
| 2024 | | | $ 1.21 | $ 58.53 | $ 13.90 | $ 83.55 | $ 1.76 | $ 85.32 | $ 6,684 | $ 18,300 | $ 24,984 | $ 79.90 | $ 6,672 | $ 26,679 | $ 33,351 | $ 106.65 | $ (8,367) |
| 2025 | | | $ 1.21 | $ 58.53 | $ 14.45 | $ 88.44 | $ 1.87 | $ 90.31 | $ 6,948 | $ 18,250 | $ 25,198 | $ 80.80 | $ 6,936 | $ 28,163 | $ 35,099 | $ 112.55 | $ (9,901) |
| 2026 | | | $ 1.21 | $ 58.53 | $ 15.00 | $ 91.62 | $ 1.93 | $ 93.55 | $ 7,224 | $ 18,250 | $ 25,474 | $ 81.69 | $ 7,200 | $ 29,175 | $ 36,375 | $ 116.64 | $ (10,901) |
| 2027 | | | $ 1.21 | $ 58.53 | $ 15.58 | $ 97.35 | $ 2.05 | $ 99.40 | $ 7,524 | $ 18,250 | $ 25,774 | $ 82.65 | $ 7,476 | $ 30,999 | $ 38,475 | $ 123.37 | $ (12,700) |
| 2028 | | | $ 1.21 | $ 58.53 | $ 16.18 | $ 97.31 | $ 2.05 | $ 99.36 | $ 7,824 | $ 18,300 | $ 26,124 | $ 83.54 | $ 7,764 | $ 31,072 | $ 38,836 | $ 124.19 | $ (12,712) |
| 2029 | | | $ 1.21 | $ 58.53 | $ 16.80 | $ 99.54 | $ 2.10 | $ 101.64 | $ 8,136 | $ 18,250 | $ 26,386 | $ 84.61 | $ 8,064 | $ 31,696 | $ 39,760 | $ 127.50 | $ (13,374) |
| 2030 | | | $ 1.21 | $ 58.53 | $ 17.45 | $ 101.77 | $ 2.15 | $ 103.92 | $ 8,460 | $ 18,250 | $ 26,710 | $ 85.65 | $ 8,376 | $ 32,408 | $ 40,784 | $ 130.78 | $ (14,074) |
| 2031 | | | $ 1.21 | $ 58.53 | $ 18.13 | $ 104.07 | $ 2.20 | $ 106.26 | $ 8,796 | $ 18,250 | $ 27,046 | $ 86.73 | $ 8,700 | $ 33,138 | $ 41,838 | $ 134.16 | $ (14,792) |
| 2032 | | | $ 1.21 | $ 58.53 | $ 18.83 | $ 106.37 | $ 2.24 | $ 108.62 | $ 9,156 | $ 18,300 | $ 27,456 | $ 87.80 | $ 9,036 | $ 33,966 | $ 43,002 | $ 137.51 | $ (15,546) |
| 2033 | | | $ 1.21 | $ 58.53 | $ 19.58 | $ 108.80 | $ 2.30 | $ 111.09 | $ 9,516 | $ 18,250 | $ 27,766 | $ 89.04 | $ 9,396 | $ 34,645 | $ 44,041 | $ 141.22 | $ (16,275) |
| 2034 | | | $ 1.21 | $ 58.53 | $ 20.33 | $ 111.25 | $ 2.35 | $ 113.60 | $ 9,900 | $ 18,250 | $ 28,150 | $ 90.27 | $ 9,756 | $ 35,425 | $ 45,181 | $ 144.88 | $ (17,031) |
| 2035 | | | $ 1.21 | $ 58.53 | $ 21.10 | $ 113.75 | $ 2.40 | $ 116.15 | $ 10,296 | $ 18,250 | $ 28,546 | $ 91.54 | $ 10,128 | $ 36,223 | $ 46,351 | $ 148.63 | $ (17,804) |
| Total | | | | | | | | | $ 167,040 | $ 456,563 | $ 623,593 | | $ 152,182 | $ 712,410 | $ 864,592 | | $ (240,999) |
| NPV | | | | | | | | | $ 53,686 | $ 172,486 | $ 226,172 | | $ 42,746 | $ 253,644 | $ 296,390 | | $ (70,218) |