



Memorandum from the Office of the Inspector General

February 25, 2025

Jeremy P. Fisher

REQUEST FOR FINAL ACTION – AUDIT 2024-17482 – TVA'S SOLAR POWER
PURCHASE AGREEMENTS

Attached is the subject final report for your review and final action. Your written comments, which addressed your management decision and actions planned or taken, have been included in the report. Please notify us when final action is complete. In accordance with the Inspector General Act of 1978, as amended, the Office of the Inspector General is required to report to Congress semiannually regarding audits that remain unresolved after 6 months from the date of report issuance.

If you have any questions or wish to discuss our findings, please contact Rick L. Taylor, Audit Manager, at (865) 633-7370 or Rick C. Underwood, Director, Financial and Operational Audits, at (423) 785-4824. We appreciate the courtesy and cooperation received from your staff during the audit.

A handwritten signature in black ink that reads "David P. Wheeler".

David P. Wheeler
Assistant Inspector General
(Audits and Evaluations)

RLT:KDS

Attachment

cc (Attachment):

TVA Board of Directors
Ying Ying P. Ayliffe
Buddy Eller
David B. Fountain
Christopher W. Hansen
Jeffrey J. Lyash
Jill M. Matthews
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Ben R. Wagner
OIG File No. 2024-17482



Office of the Inspector General

Audit Report

To the Senior Vice
President, Strategy and
Communication Officer,
Commercial Energy
Solutions

TVA'S SOLAR POWER PURCHASE AGREEMENTS

Audit Team
Rick L. Taylor
Michael C. Cook

Audit 2024-17482
February 25, 2025

ABBREVIATIONS

CES	Commercial Energy Solutions
FERC	Federal Energy Regulatory Commission
IRP	Integrated Resource Plan
MW	Megawatt
MWh	Megawatt Hour
NPV	Net Present Value
PPA	Power Purchase Agreement
REC	Renewable Energy Credit
SPP	Standard Programs and Processes
TVA	Tennessee Valley Authority
TVA Board	TVA Board of Directors

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MEMORANDUM DATED FEBRUARY 14, 2025, FROM JEREMY P. FISHER TO
DAVID P. WHEELER



Audit 2024-17482 – TVA’S Solar Power Purchase Agreements

EXECUTIVE SUMMARY

Why the OIG Did This Audit

The Tennessee Valley Authority (TVA) has set a goal of increasing its solar capacity to 10,000 megawatts by 2035.ⁱ Due to issues in the solar industry resulting in project delays and price increases, we performed an audit of TVA’s solar power purchase agreements (PPAs). Our audit objectives were to determine (1) how supply chain disruptions, construction and in-service delays, contract restructuring, and other factors have affected TVA’s solar PPAs and (2) if any restructured PPAs are still in TVA’s financial interest. Our audit scope included solar PPAs that were in place as of February 8, 2024, which included agreements for currently operating facilities and those contracted for future power generation.

What the OIG Found

We determined the COVID-19 pandemic, supply chain disruptions, construction and in-service delays, contract restructuring, and other factors resulted in TVA:

- Renegotiating 18 of its 31 solar PPAs, including 10 that have been completed and an additional 8 that were in the process of being renegotiated. Additionally, we determined 8 of the 10 renegotiated PPA contracts’ net present value (NPV)ⁱⁱ decreased. The decline in project NPV was partially offset by anticipated revenue from renewable energy credits (REC).ⁱⁱⁱ The cost increases had no impact on TVA’s financial interests because purchased power costs are recouped through TVA’s fuel cost adjustment.^{iv}
- Changing its business model philosophy on entering into solar PPAs.
- Making changes to improve the structure of its PPA contracts.

In addition, we identified opportunities for improvement related to (1) requiring economic analyses and (2) selecting new solar developers.

ⁱ According to TVA’s fiscal year 2023 Sustainability Report, dated May 6, 2024, part of TVA’s goal of moving to a net-zero carbon energy future includes a goal of 10,000 MW of solar capacity by 2035.

ⁱⁱ NPV is used in capital budgeting to analyze the profitability of a projected investment or project.

ⁱⁱⁱ A REC is a commodity that is created when one MWh of energy is created from a renewable energy resource.

^{iv} TVA recovers fuel costs and tax equivalent payments associated with fuel cost adjustments through a monthly rate reflecting the forecasted costs of fuel. Total monthly fuel costs include costs for natural gas, fuel oil, coal, purchased power, emission allowances, nuclear fuel, and other fuel-related commodities as well as realized gains and losses on derivatives purchased to hedge the costs of such commodities.



Audit 2024-17482 – TVA’S Solar Power Purchase Agreements

EXECUTIVE SUMMARY

What the OIG Recommends

We made three recommendations to the Senior Vice President, Strategy and Communications Officer, Commercial Energy Solutions, to (1) consider establishing a negative NPV threshold, that upon reaching, TVA’s Board of Directors must be consulted prior to entering into solar PPAs, (2) require an economic analysis when there is a proposed price change to a PPA, and (3) consider taking a measured approach with new developers by limiting the number of contracts with the developers until a performance history has been established.

TVA Management’s Comments

In response to our draft report, TVA management agreed with our recommendations and provided actions they plan to take to address each of our recommendations. TVA management also provided clarifying language and informal comments that have been incorporated into the final report as appropriate. See the Appendix for TVA management’s complete response.

Auditor’s Response

We agree with TVA management’s planned actions.

BACKGROUND

According to the Tennessee Valley Authority's (TVA) President and Chief Executive Officer, TVA is "working to serve regional growth while also developing a pathway toward a net-zero carbon energy future. TVA is working to build a diverse, clean energy system that combines hydropower, existing and new nuclear generation, renewable energy, utility scale battery storage and other innovations."

In June 2019, TVA completed an Integrated Resource Plan (IRP) to determine how TVA could best meet the demand for electricity in its service territory over the next 20 years, while achieving objectives to deliver reliable, low-cost, and cleaner energy with fewer environmental impacts. The 2019 IRP recommended the expansion of solar generating capacity by up to 14,000 megawatts (MWs) by 2038. According to TVA's fiscal year 2023 Sustainability Report, part of TVA's goal of moving to a net-zero carbon energy future includes a goal of 10,000 MW of solar capacity by 2035. TVA's primary source of the 10,000 MW of solar will be power purchase agreements (PPAs), where a third party develops the solar facility and sells TVA the electricity produced. TVA has entered into 31 solar PPAs through February 8, 2024, representing 3,440 MW of total nameplate capacity. Figure 1 below shows a breakdown of the 31 PPAs and their project status, including the cumulative MW capacity associated with each project status category.

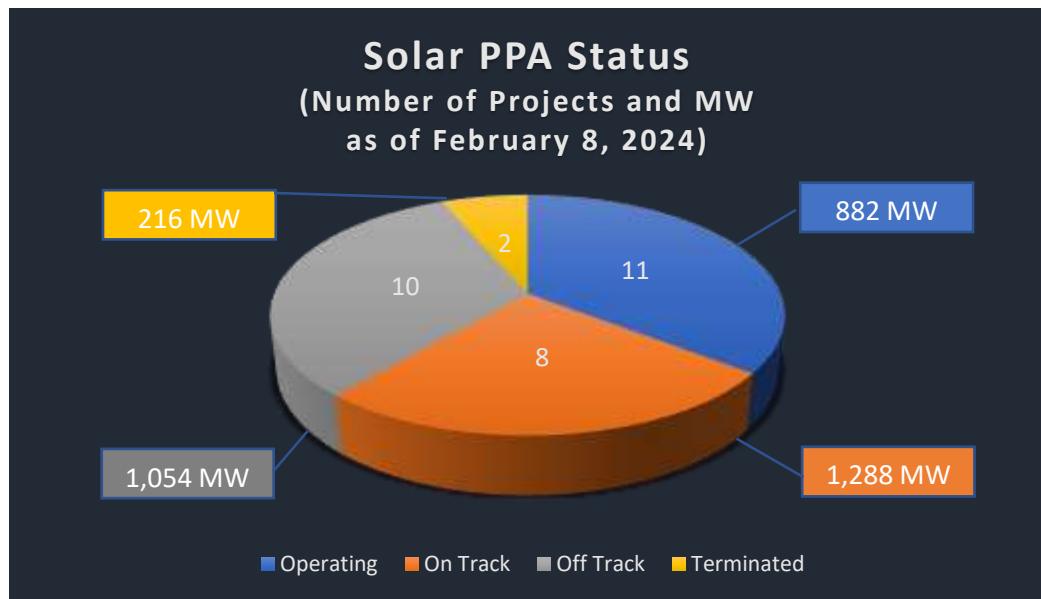


Figure 1

Solar Challenges

One of the challenges with solar expansion is the amount of land required to complete solar projects. According to multiple TVA presentations, TVA's 10,000 MW goal would require 100,000 acres or 156.25 square miles. Another challenge for solar is the intermittency of solar generation. According to TVA's

2019 IRP, solar generation has a capacity factor¹ of 23 percent. This means, for example, that a 500 MW solar farm would generate around 115 MW daily on average during a year. In addition, the solar industry has experienced delays due to many factors such as the COVID-19 pandemic, supply chain issues, tariffs, higher interest rates, and inflation.

According to TVA personnel, much of the solar industry delay problems occurred in the 2020 to 2024 timeframe. The projects that experienced the most delays were initiated in 2018 through 2022, which was just prior to or during the period of the COVID-19 pandemic and development of the supply chain issues. Table 1 below shows the time between the original initial delivery date² and the expected initial delivery date for 28 of the 31 solar PPAs in our population (the table does not include the two terminated projects). The longest delay is expected to be five and a half years if the project is completed by the revised initial delivery date.

Length of Delays from Original Initial Delivery Date (Includes actual delays for the 11 operating PPAs)	
Years Delayed	Count of Projects
Not Delayed	6
Less than 1 year	9
Between 1 and 2 years	4
Between 2 and 3 years	6
Between 3 and 4 years	2
Greater than 4 years	2
Total	29

Table 1

According to the Federal Energy Regulatory Commission (FERC), “The growth of new resources seeking to interconnect to the transmission system and the differing characteristics of those resources have created new challenges for the generator interconnection process. These new challenges are creating large interconnection queue backlogs and uncertainty regarding the cost and timing of interconnecting to the transmission system, increasing costs for consumers. Backlogs in the generator interconnection process, in turn, can create reliability issues as needed new generating facilities are unable to come online in an efficient and timely manner.” To help alleviate some of the delays facing the solar industry, FERC issued Order 2023. The order addressed, among other things, transmission/interconnection delays or backlogs and aimed to transition the approach to require the electric utility to study and approve multiple solar interconnection projects at one time.

¹ Capacity factor is the ratio of the electrical energy produced by a generating unit for the period of time considered to the electrical energy that could have been produced at continuous full power operation during the same period.

² Initial delivery date means the first day following TVA’s approval of notice from a seller that (1) all actions by the seller necessary to construct and operate the project and generate the contract output have been taken; and (2) the project is fully interconnected, integrated, and synchronized with the TVA transmission system.

According to TVA's Commercial Energy Solutions (CES) personnel, it could take several years for TVA to develop the new interconnection process to comply with FERC Order 2023. TVA expects a longer interconnection process with projects taking 7 to 10 years to interconnect and solar pricing to remain elevated and not "economic" for several years. Additionally, an industry report provided by CES personnel indicated it could take at least 10 years to interconnect.

TVA Solar PPA Philosophy from 2018 to 2023

Historically, TVA's strategy for solar PPAs was to avoid projects with negative net present value (NPV).³ A 2021 audit⁴ of TVA's solar PPAs determined TVA's PPA contracts that had an identified customer were projected to break even during the term of the contract or have a positive NPV. TVA's approach to utilizing utility-scale solar from 2018 through 2023 was to identify a third party to develop the solar project, and TVA would purchase the power from the developer through a PPA. For these solar PPA projects, TVA would find a customer willing to pay the difference in the PPA price minus the Value to System⁵ price, which TVA refers to as the renewable energy credits (RECs)⁶ price, or delta price. TVA typically charged a REC price per megawatt hour (MWh) that was equivalent to the negative delta price. The RECs offset the difference in the price TVA was paying for the electricity from the solar PPA and what it would have cost TVA to build a generating facility that was cheaper to produce the electricity it was buying through the solar PPA.

Internal Control

CES's Standard Programs and Processes (SPP) 21.704, *Power Acquisition*, requires TVA to engage Enterprise Planning and coordinate performance of a rigorous economic evaluation of all credible proposals, whether they are unsolicited or in response to a request for proposal. This analysis "involves identifying the scope, identifying alternatives, developing assumptions, defining metrics and trade-offs, and modeling the impacts of the decision in TVA's long-range capacity and generation model."

The SPP also requires CES to obtain concurrence from TVA's Office of the General Counsel, Corporate Credit and Insurance, Portfolio Risk Management and Analysis, Controller/Accounting Policy, and Resource Planning and Strategy organizations as applicable. The purpose of the concurrence is to ensure PPA contracts have considered legal sufficiency, counterparty credit risk, risk assessment and economic analysis, appropriate accounting treatment, and portfolio strategy and oversight. The economic analysis and concurrence by the applicable TVA organizations prior to contract execution were two controls we deemed significant to the audit objectives.

³ NPV is used in capital budgeting to analyze the profitability of a projected investment or project.

⁴ Audit 2021-15782, *Solar Purchased Power Agreements*, August 26, 2021.

⁵ Value to System is the TVA avoided cost to build a combustion turbine.

⁶ A REC is a commodity that is created when one MWh of energy is created from a renewable energy resource.

OBJECTIVES, SCOPE, AND METHODOLOGY

Our audit objectives were to determine (1) how supply chain disruptions, construction and in-service delays, contract restructuring, and other factors have affected TVA's solar PPAs, and (2) if any restructured PPAs are still in TVA's financial interest. Our audit scope included solar PPAs that were executed as of February 8, 2024, (including agreements for currently operating facilities, those contracted for future power generation, and those terminated), which included 31 solar PPAs totaling 3,440 MWs. To achieve our objectives, we:

- Reviewed TVA CES-SPP 21.704, *Power Acquisition*, and Enterprise Planning TVA-SPP-13.950, *Economic Analysis*, as well as other SPPs and relevant program guidance related to PPAs to identify key requirements applicable to the evaluation and execution of solar PPAs.
- Determined the significance of internal control to our audit objectives and documented our understanding of the internal control environment relating to the solar PPAs, including the primary controls in place, as well as our identification of the controls we determined were significant to the audit objectives. In addition to the internal control discussed in our findings, we determined the requirement in CES-SPP-21.704, *Power Acquisition*, that a concurrence package is performed before contract execution for all solar PPAs documenting organization approval from organizations that will be significantly affected by the transaction to be a control significant to the audit objective. We determined this control was properly designed, implemented appropriately, and was operating effectively.
- Interviewed personnel in TVA's CES, Enterprise Risk and Assurance, and Enterprise Planning organizations to obtain information related to TVA's solar PPAs.
- Obtained and reviewed a list of all TVA solar PPAs that were executed through February 8, 2024, and performed procedures to assess the reliability of the data related to each PPA.
- Obtained and reviewed all 31 solar PPA contracts, contract supplements (if necessary), and concurrence packages.
- Determined the status of each of the 31 solar PPAs (i.e., on track, off track, operating, or terminated).

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

FINDINGS

We determined the COVID-19 pandemic, supply chain disruptions, construction and in-service delays, contract restructuring, and other factors resulted in TVA:

- Renegotiating 18 of its 31 solar PPAs, including 10 that have been completed and an additional 8 that are in the process of being renegotiated. Additionally, we determined 8 of the 10 renegotiated PPA contracts' NPV decreased. The decline in the projects' NPVs was partially offset by anticipated REC revenue. The cost increases had no impact on TVA's financial interests because purchased power costs are recouped through TVA's fuel cost adjustment.⁷
- Changing its business model philosophy on entering into solar PPAs.
- Making changes to improve the structure of its PPA contracts.

In addition, we identified opportunities for improvement related to (1) requiring economic analyses and (2) selecting new solar developers.

Details of our findings are discussed below.

RENEGOTIATION OF SOLAR POWER PURCHASE AGREEMENTS CONTRACTS

As shown in Figure 1 in the background, TVA has 18 solar projects under development as of February 8, 2024. Due to significant price increases, TVA has completed contract renegotiations on 10 of the PPAs and is currently renegotiating new contract terms on the other 8 PPAs. The 10 renegotiated PPAs have experienced price increases ranging from 4.49 percent to 79.8 percent. Seven of the 10 price increases exceeded 23 percent. The average price increase for the 10 solar PPAs was \$7.72/MWh and the average levelized cost of energy⁸ increase was \$9.93/MWh.

Nine of the renegotiated contracts had negative NPVs according to updated economic analyses performed on each. Additionally, 8 of the 10 renegotiated PPAs had price increases that negatively impacted the solar PPA project's NPV. Table 2, on the following page, highlights how the price increases for the renegotiated PPAs led to a cumulative decrease in the projects' NPV of almost \$242 million. The \$242 million decline in project NPV was partially offset by anticipated REC revenue of approximately \$113 million leaving a negative NPV for these projects of \$142 million.

⁷ TVA recovers fuel costs and tax equivalent payments associated with fuel cost adjustments through a monthly rate reflecting the forecasted costs of fuel. Total monthly fuel costs include costs for natural gas, fuel oil, coal, purchased power, emission allowances, nuclear fuel, and other fuel-related commodities as well as realized gains and losses on derivatives purchased to hedge the costs of such commodities.

⁸ Levelized cost of energy is a measure of how much a power facility will need to be compensated over its operational lifetime for the investment to break even. To calculate the levelized cost of energy, the NPV of the project's costs is divided by the NPV of the energy produced.

Change In Net Present Value (For the 10 renegotiated PPAs)					
Project	Original NPV	Updated NPV	Change in Dollars	REC Revenue	Updated NPV with REC Revenue
Project 1	(\$3,929,241)	(\$45,542,930)	(\$41,613,689)	\$23,277,066	(\$22,265,864)
Project 2	9,329,293	(32,585,713)	(41,915,006)	14,978,466	(17,607,247)
Project 3	(2,787,936)	(7,552,993)	(4,765,057)	7,552,993	0
Project 4	(4,464,457)	(18,973,385)	(14,508,928)	18,973,385	0
Project 5	(2,177,793)	(35,633,515)	(33,455,722)	0	(35,633,515)
Project 6	4,220,000	(49,463,310)	(53,683,310)	0	(49,463,310)
Project 7	(1,749,849)	(41,499,549)	(39,749,700)	20,825,570	(20,673,979)
Project 8	318,566	2,668,998	2,350,432	742,989	3,411,987
Project 9	(874,025)	(662,962)	211,063	742,990	80,028
Project 10	(11,565,841)	(26,366,483)	(14,800,642)	26,366,483	0
Total	(\$13,681,283)	(\$255,611,842)	(\$241,930,559)	\$113,459,942	(\$142,151,900)

Table 2

The average market price for TVA's five most recently completed PPA contracts (signed in calendar years 2023 and 2024) were about 90 percent greater than the price of PPA contracts entered into in calendar years 2011 through 2021. Based on recent market prices and the most recently completed renegotiations, it does not appear the eight still under negotiation will result in positive NPVs. However, the cost increases had no impact on TVA's financial interests because purchased power costs are recouped through TVA's fuel cost adjustment.

CHANGES MADE TO TVA'S SOLAR POWER PURCHASE AGREEMENTS BUSINESS MODEL PHILOSOPHY

According to TVA's 2019 IRP, TVA wanted to add solar generation based on economics and customer demand. At the time of the 2019 TVA IRP, TVA stated the price of renewable resources, particularly solar, continues to decline. As stated in the background, TVA's former approach to solar PPAs avoided projects with negative NPV, which prevented the TVA system and ratepayers from subsidizing the decision made to purchase power through the PPAs. However, in most instances, the PPA cost was more expensive than other alternative power generation available to TVA. Under this approach:

- TVA wanted (1) additional solar capacity to meet demand, (2) the ability to reduce green-house gas emissions, and (3) the ability to meet customer environmental desires.
- The solar developer wanted to produce and sell electricity at prices that allowed it to profit.
- REC customers were able to purchase the RECs produced from the solar PPA and show they were meeting a portion of their energy needs without carbon emissions.

TVA's approach to solar PPAs changed in 2023 because the cost to develop solar generation for PPAs had increased by about 100 percent since 2020. These significant PPA price increases resulted in customers not being willing to pay the higher REC price. This is evidenced by the lack of customers for the RECs associated with the last five solar PPAs TVA has entered into. In addition, TVA had REC customers for two solar PPAs opt out of purchasing the RECs because the PPAs experienced price increases, and the customers decided the renegotiated REC price was too high. According to TVA personnel, TVA would not have entered into solar PPAs under the previous business model if the REC price per MWh could not be sold to fully offset, or offset all but a nominal amount of, the PPA price delta.

As the price of solar generation increased, the TVA Executive Leadership Team made the determination that solar and other renewable generation sources are a system need, meaning TVA needs renewable capacity and is willing to enter into solar PPAs to meet capacity needs even if (1) there are other generating options that are less expensive,⁹ and (2) TVA cannot sell the REC prices for the full REC price. In 2023, the TVA Board of Directors (TVA Board) approved the fiscal year 2024 Commercial Transactions Contracting Plan, which approved the renewable transition from being customer-driven to being both customer and system need-driven. In 2024, the TVA Board approved the fiscal year 2025 Commercial Transactions Contracting Plan, which stated TVA will continue to procure renewables to support TVA system and customer needs.

As a result of these strategic decisions and TVA's REC customers no longer being willing to pay the entire REC price, TVA ratepayers are now subsidizing some of the difference in the increased PPA price. In the past, the pricing of TVA's PPAs for renewable power did not impact ratepayers that were not requesting renewable power negatively. The customers that requested the renewable power bore the financial impact of these projects. Under TVA's current system, the additional cost for renewable energy will be passed on to all rate payers.

CHANGES MADE TO IMPROVE SOLAR POWER PURCHASE AGREEMENTS CONTRACTS

TVA has made changes to its solar PPA contracts in an attempt to mitigate PPA project delays. We reviewed the contract changes that were made to the five most recent solar PPAs TVA entered into for the period December 29, 2023, through February 8, 2024. The contract changes included:

- Required monthly project status reporting by the solar PPA developer.
- Increased performance assurance requirement payments and damages for not meeting the initial delivery date, which is an incentive for the seller to meet deadlines and complete the project.

⁹ See the Appendix for clarifying comments provided by TVA management.

- A detailed list of requirements the seller has to meet before the seller could request a Notice to Proceed. The detailed list of requirements eliminated ambiguity in the earlier solar PPA contracts with regard to when the seller should request TVA's approval to proceed.
- Required adequate written assurance from the seller of its ability to meet the initial delivery date if TVA has reasonable grounds for believing the seller will not meet the delivery date.

These contracting changes may or may not mitigate PPA project delays, but they were improvements from the earlier PPA contracting language. These changes provide more timely information to TVA concerning the project status and provide increased collateral from the developer to TVA.

OPPORTUNITIES FOR IMPROVEMENT

We identified opportunities for improvement related to CES's SPP and TVA's practice for selecting solar developers. Specifically, we determined (1) CES-SPP-21.704, *Power Acquisition*, could be improved by requiring an economic analysis be completed for solar PPAs when there is a proposed price change, and (2) TVA could take a measured approach when selecting new developers.

Commercial Energy Solutions' SPP Could Be Improved

As noted in our discussion of internal control in the background section of the report, we identified the requirement in CES-SPP-21.704 for CES to engage Enterprise Planning and coordinate performance of a rigorous economic evaluation of all credible proposals, whether they are unsolicited or in response to a request for proposal as a key control. This control has not been designed effectively because a second economic analysis is not currently required by the SPP when there is a proposed price change in the solar PPA.

The likely effect of the deficiency in the design of the control to perform another economic analysis, when there is a proposed price change in the PPA, could prevent TVA from "identifying the scope, identifying alternatives, developing assumptions, defining metrics and trade-offs, and modeling the impacts of the decision in TVA's long-range capacity and generation model."

Many solar PPA projects have experienced delays and price increases that will result in TVA incurring significant additional costs over the life of the PPA. Although not currently required by the SPP, CES personnel did engage with Enterprise Planning and coordinated another economic evaluation of the 10 solar PPA projects that were renegotiated to evaluate the economic impact of the increased price.

The SPP could be strengthened by requiring an economic evaluation to be performed when the economics of the project change, to provide information regarding whether the project should continue. According to Enterprise Planning

personnel, they perform an updated economic evaluation when a project's economics change, but it is up to the organization responsible for the project to request the updated economic evaluation.

Approach to Selecting Developers Could Be Improved

Of the 31 solar PPAs TVA has entered into, 13 of the PPAs were with a developer that was new to TVA. All 13 of the projects experienced delays, with 9 experiencing delays of at least one year; 1 is experiencing at least a 5-year delay, 2 are experiencing a 3-year delay, 3 are experiencing a 2-year delay, and 3 are experiencing a 1-year delay. In addition, 4 of the 13 PPAs have experienced a price increase and as of September 30, 2024, prices were being renegotiated for 8 of the projects. TVA management could have learned valuable insights by taking a measured approach to selecting new developers TVA is not familiar with or ones that are new to TVA.

RECOMMENDATIONS

We recommend the Senior Vice President, Strategy and Communications Officer, Commercial Energy Solutions:

1. Consider establishing a negative NPV threshold, that upon reaching, the TVA Board must be consulted prior to entering into solar PPAs.

TVA Management Comments – In response to our draft report, TVA management agreed with our recommendation and stated TVA will consider an NPV or other appropriate economic-alternative metrics in an updated process that ensures appropriate TVA Board oversight. See the Appendix for TVA management's complete response.

Auditor's Response – We agree with TVA management's planned action.

2. Update CES-SPP-21.704 to require utility scale solar PPAs have a second economic analysis if the project has a proposed change to the price from the original contract amount.

TVA Management Comments – In response to our draft report, TVA management agreed with our recommendation and stated CES-SPP-21.704 would be updated to document this practice. See the Appendix for TVA management's complete response.

Auditor's Response – We agree with TVA management's planned action.

3. Consider taking a measured approach with new developers by limiting the number of contracts with the developers until a performance history has been established.

TVA Management Comments - In response to our draft report, TVA management agreed with our recommendation and stated CES-SPP-21.704 would be updated to include this consideration. See the Appendix for TVA management's complete response.

Auditor's Response – We agree with TVA management's planned action.

February 14, 2025

David P. Wheeler
Assistant Inspector General, Audits and Evaluations

REQUEST FOR COMMENTS – DRAFT AUDIT 2024-17482 – TVA'S SOLAR POWER
PURCHASE AGREEMENTS

This is in response to the recommendations provided in your recent draft Audit Report of TVA's Solar Power Purchase Agreements (PPA). We appreciate the efforts put forth by Rick Taylor, Michael Cook, and the team to conduct this evaluation. We agree with the three recommendations to improve the solar PPA process.

After reviewing the Audit Report, we note that on page 7, the report states that "TVA...is willing to enter into solar PPAs to meet capacity needs even if (1) *there are other generating options that are less expensive...*" We would like to clarify that though the valuation implies there were other generating options that are less expensive, there was significant risk on the availability of other generating options due to permitting and supply chain constraints and other challenges. This risk was a significant driver for TVA's decision to add these solar PPAs to the portfolio to enable reliable power supply.

We have considered the recommendations enumerated on page 9 of the report, and our responses are below.

Recommendation 1. *Consider establishing a negative NPV threshold, that upon reaching, the TVA Board must be consulted prior to entering into solar PPAs.*

Response: Agree. We will consider an NPV or other appropriate economic-alternative metrics in updated process that ensure appropriate Board oversight.

Recommendation 2. *Update CES-SPP-21.704 to require utility scale solar PPAs have a second economic analysis if the project has a proposed change to a price from the original contract amount.*

Response: Agree. CES-SPP-21.704 will be updated to document this practice.

Recommendation 3. *Consider taking a measured approach with new developers by limiting the number of contracts with the developers until a performance history has been established.*

Response: Agree. CES-SPP-21.704 will be updated to include this consideration.

David P. Wheeler
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February 14, 2025

Thank you for the opportunity to review and respond. If you have any questions or concerns please contact Ying Ayliffe, Director, Origination and Utility Scale Solar at 865-617-7200.

Thank you,



Jeremy P. Fisher
Senior Vice President
Business Strategy & Commercial Affairs

CRR; YPA

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