

October 29, 2025

Ms. Lisa Felice
Executive Secretary
Michigan Public Service Commission
7109 W. Saginaw Hwy., 3rd Floor
Lansing, MI 48917

Re: Case No. U-21870 – In the matter of the application of Consumers Energy Company for authority to increase its rates for the generation and distribution of electricity and for other relief.

Dear Ms. Felice:

Enclosed for electronic filing in the above-captioned case, please find **Consumers Energy Company's Response to Michigan Environmental Council's Motion to Strike**. This is a paperless filing and is therefore being filed only in a PDF. Also included is a Proof of Service showing electronic service upon the persons included in Attachment 1.

Sincerely,

Bret A. Totoraitis
Phone: 517-788-0835
Email: bret.totoraitis@cmsenergy.com
cc: Parties per Attachment 1 to the Proof of Service.

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of)
CONSUMERS ENERGY COMPANY)
for authority to increase its rates for)
the generation and distribution of)
electricity and for other relief.)
_____)

Case No. U-21870

**CONSUMERS ENERGY COMPANY’S RESPONSE TO
MICHIGAN ENVIRONMENTAL COUNCIL’S MOTION TO STRIKE**

Pursuant to Rule 432 of the Michigan Public Service Commission’s (“MPSC” or the “Commission”) Rules of Practice and Procedure, R 792.10432, Consumers Energy Company (“Consumers Energy” or the “Company”) files this Response to the Michigan Environmental Council’s (“MEC”) Motion to Strike portions of the pre-filed rebuttal testimony and exhibits of Consumers Energy witness Richard T. Blumenstock (“Motion to Strike”). MEC argues that the identified portions of the rebuttal testimony and exhibits of Mr. Blumenstock should be stricken on the grounds (i) that they are not proper rebuttal testimony and (ii) that they lack proper foundation. See MEC’s Motion to Strike, page 2. There is no merit to those claims. MEC’s Motion to Strike must be rejected. In support of its Response, the Company states as follows:

I. Company Witness Blumenstock’s Rebuttal Testimony and Exhibits are Proper Rebuttal Evidence that Directly Responds to MEC’s Proposed Disallowance

In his direct testimony, MEC witness Tyler Comings argued that modeling estimates used to support the energy and capacity benefits of a proposed generation capital project “are dependent on the underlying assumptions and methodology” and that a “reasonable methodology can lead to unreasonable results if the input assumptions are unreasonable.” Comings Direct Testimony, pages 15-16. Mr. Comings further argued that there were several deficiencies in

Mr. Blumenstock's modeling of the energy and capacity benefits associated with two capital projects underway at Consumers Energy's Jackson generating plant. See Comings Direct Testimony, pages 17-20. Therefore, Mr. Comings concluded that there was not support for Mr. Blumenstock's claim that the benefits of the projects justified the costs and recommended that the Commission disallow both projects. See Comings Direct Testimony, pages 19-20. Mr. Comings proposed disallowance was tied to his claim that, "if some or all of these assumptions are not reasonable, then the energy or capacity value estimate is not reasonable." Comings Direct Testimony, page 16.

Company witness Blumenstock responded to this testimony in his rebuttal by correcting some of the assumptions contained in his original analysis in order to show that the energy and capacity benefits of both capital projects nevertheless remained reasonable to justify the costs. Though the magnitude of the benefit was not as great as originally shown, the claim that the energy and capacity value was not reasonable to support the projects is not true.

The Commission has long adopted the following statement regarding the proper use of rebuttal testimony from the Michigan Court of Appeals' opinion in *Kirk v Ford Motor Co*, 147 Mich App 337, 345; 383 NW2d 193 (1985): "Rebuttal evidence is broadly defined as that given by one party to contradict, repel, explain or disprove evidence produced by the other party and tending directly to weaken or impeach the same." See, e.g., Case Nos. U-8871, January 31, 1989 Order,¹ page 96; U-15985, June 3, 2010 Order, page 23. The portions of Mr. Blumenstock's rebuttal testimony and exhibits identified in MEC's Motion to Strike was offered directly to

¹ The Commission's electronic archive of its orders on the state's website at <https://adms.apps.lara.state.mi.us/MPSC/CommissionOrdersSearch> incorrectly identifies the date of the order as January 29, 1989. Please be advised that, if searching for the January 31, 1989 Order in Case No. U-8871 in the MPSC's electronic archive, using the correct order date to limit the search will inadvertently exclude it.

“contradict” and to “disprove” testimony by MEC witness Comings and it “tend[s] directly to weaken” Mr. Comings’ argument that the deficiencies in Mr. Blumenstock’s original assumptions render the financial justification for these projects unreasonable. Furthermore, Mr. Blumenstock’s testimony “explains” the impact of the evidence presented by MEC witness Comings. In this case, he explains that Mr. Comings’ observations about the assumptions, while in some cases true, nevertheless do not compel the result Mr. Comings urges on the Commission.

MEC attempts to cast Mr. Blumenstock’s testimony as “rehabilitation,” rather than rebuttal, and claims that it is improper on that basis, but there is no merit to that argument. First, MEC makes no allowance for the possibility that a particular piece of testimony could serve both a rebuttal function and a rehabilitation function simultaneously. As discussed above, Mr. Blumenstock’s testimony satisfies the longstanding criteria to be rebuttal testimony. Nothing in the Commission’s precedents indicates that testimony satisfying the standards for proper rebuttal testimony is nevertheless rendered improper if it also happens to rehabilitate the witness’s earlier testimony. MEC cites Case No. U-8871² as alleged support for the proposition that the Commission found that rehabilitation is always improper in rebuttal testimony. However, MEC fails to accurately analyze the Commission’s decision in that case. In Case No. U-8871, the Commission identified two issues with the Attorney General’s proposed rebuttal testimony: (i) it was “*merely* rehabilitative” (emphasis added) and (ii) it failed to clearly indicate what specifically was being rebutted. January 31, 1989 Opinion and Order, page 97. It was the combination of those things that rendered the testimony objectionable in Case No. U-8871.³ The problem with

² MEC’s Motion to Strike cites pages 152-154 of the Commission’s January 31, 1989 Order in Case No. U-8871; however, there are only 114 pages in the order. The correct citation to that discussion should point to pages 96-97.

³ MEC’s reliance on Case No. U-20963 is also inapposite. In Case No. U-20963, the Commission disallowed rate recovery in that case for two subprojects related to a large water source project. See December 22, 2021 Order,

that rebuttal testimony was that it only (i.e. merely) rehabilitated but did not also rebut anything. That is not the case here.

Second, rehabilitation is not a generally impermissible practice as MEC suggests. In fact, rehabilitation is specifically permitted by the Michigan Court Rules. See Michigan Rules of Evidence 608(a) (expressly permitting the introduction of rehabilitation evidence when a witness's character for truthfulness has been attacked) and 613(b) (expressly permitting the introduction of rehabilitation evidence to respond to evidence of prior inconsistent statements). These rules are consistent with other nationally recognized sources that discuss generally accepted practice theory. Black's Law Dictionary, 6th Ed., defines "rehabilitation," as it pertains to a witness, as follows: "After cross examination, a witness whose credibility has suffered may be examined again (redirect examination) to improve his standing with the trier of fact in matters covered under cross examination." Emphasis added. Similarly, McCormick on Evidence, 5th Ed., has this to say about "rehabilitation":

[T]here are three stages in credibility analysis: bolstering before attempted impeachment, impeachment, and rehabilitation after attempted impeachment. Impeachment is not a dispassionate study of the witness's capacities and character, but rather is regarded in our tradition as an *attack* upon his credibility. Under our adversary system of trials, the witness's proponent must be given an opportunity to meet this attack by evidence rehabilitating the witness. As we have seen, one general principle, operative under both case law and the Federal Rules of Evidence, is that absent an attack upon credibility, no bolstering evidence is allowed. Conversely, when there has been evidence of impeaching facts the witness's proponent may present contradictory evidence disproving the alleged impeaching facts. Such disproof is relevant and generally allowable. [§ 47, underline added.]

pages 110-112. The Commission did not exclude the evidence supporting the subprojects. It simply concluded that adding two entirely new subprojects for the first time in rebuttal was not appropriate because it did not give the other parties time to adequately evaluate those new projects. *Id.* at 112. Mr. Blumenstock's rebuttal of Mr. Comings does not introduce an entirely new project for rate approval.

Any rule applied in this case that generally prohibits the Company from offering evidence to rehabilitate a witness's testimony once it has been attacked would fly in the face of longstanding principles of litigation practice and the law of evidence. Consistent with the correct analysis of the Commission's decision in Case No. U-8871 discussed above, it is clear that there is no general prohibition on using rebuttal testimony to rehabilitate a witness's testimony so long as the testimony is, in fact, rebutting something at the same time. In this case, Mr. Blumenstock's testimony is clearly rebutting the arguments presented by MEC witness Comings.

Finally, MEC witness opened the door to Mr. Blumenstock's response by testifying, "I encourage the Company to address these issues and re-run the model if it wants to seek recovery for this project's costs." Comings Direct Testimony, page 18. At Mr. Comings' suggestion, Mr. Blumenstock did exactly that. A party who has "opened the door" to testimony adduced by the opposing party may not object to that testimony as inadmissible. *Donnelly v William R Johnston Mfg Co*, 227 Mich 376, 379; 198 NW 894 (1924). Even if Mr. Blumenstock's rebuttal testimony were improper (which it is not), MEC may not object to it.

II. MEC's Claim Regarding Lack of Access to Supporting Calculations for Exhibits A-202 (RTB-24) and A-203 (RTB-25) is Premature and Not Factually Supported

MEC also argues that the identified portions of Mr. Blumenstock's testimony and exhibits should be stricken because – MEC claims – the Company "will not produce the supporting calculations for the new evaluations that Mr. Blumenstock testifies support the two projects" MEC's Motion to Strike, page 6. MEC further claims that Consumers Energy asserted that the "Copperleaf model does not allow the company to do so." MEC's Motion to Strike, page 6. Those claims are inaccurate.

First, to be clear, MEC has only recently asked the Company to provide the supporting calculations behind rebuttal Exhibits A-202 (RTB-24) and A-203 (RTB-25). The responses to

those discovery requests are due to MEC on October 28 (i.e. the same date this Response is due to be filed). Therefore, MEC's claim that the Company "will not produce the supporting calculations" is premature at best.

MEC appears to base its claim on Consumers Energy's response to a request for supporting calculations behind the net present value ("NPV") figure for a different capital project, the Jackson Engine 191-306 Overhaul. MEC cites the Company's response to discovery request U21870-MNSC-CE-0224, which discusses the Jackson Engine 191-306 Overhaul, as support for its claim that the Company "cannot or will not produce supporting calculations from the Copperleaf model." See MEC Motion to Strike, page 4, n. 8. However, in U21870-MNSC-CE-0224, Consumers Energy did not state that it "cannot or will not" produce supporting calculations for the NPV for the Jackson Engine 191-306 Overhaul. Consumers Energy only stated that "the Company does not have the ability to download the supporting NPV calculation as an output of the model" Discovery response U21870-MNSC-CE-0224 is attached to this Response as Attachment A. To overcome that limitation of the software, Consumers Energy provided three attachments to discovery response U21870-MNSC-CE-0224 to enable MEC to replicate and analyze the results from the Copperleaf model. Consumers Energy provided a full electronic version of its concept approval, detailed step-by-step instructions explaining the financial evaluation methodology utilized by the Copperleaf model, and a reproduction of the NPV modeling calculation in Microsoft Excel. MEC did not file any follow-up discovery further probing or challenging the sufficiency of this information to replicate or evaluate the reasonableness of the modeling results.

Mr. Blumenstock reiterated in his rebuttal testimony that the "hard-coded calculations contained within Copperleaf are embedded into software and not able to be downloaded to a report or spreadsheet." Blumenstock Rebuttal Testimony, page 33. However, Mr. Blumenstock also

once again shared the detailed step-by-step instructions explaining the financial evaluation methodology utilized by the Copperleaf model as Exhibit A-205 (RTB-7) and explained that the Company provided attachments in discovery which included PSCR case values which are direct inputs for the models. Blumenstock Rebuttal Testimony, page 33. Mr. Blumenstock explained that “This should be sufficient to represent that the Company is employing systematic and conservative approach to quantifying the risks associated with not doing a particular project.” Blumenstock Rebuttal Testimony, page 33. To further supplement these materials, the Company intends to include screen-captures from the Copperleaf software showing the exact formulas Copperleaf employs to calculate “Lost Generation Risk” and “Financial Risk,” among other things, as part of its responses to MEC’s most recent discovery pertaining specifically to rebuttal Exhibits A-202 (RTB-24) and A-203 (RTB-25). In other words, Consumers Energy is providing (i) the inputs, (ii) the formulas, and (iii) detailed instructions explaining Copperleaf’s financial evaluation methodology. This material is all that is needed to evaluate the reasonableness of the calculations behind the Company’s concept approval reports shown in Exhibits A-202 (RTB-24) and A-203 (RTB-25). There is no factual justification for striking these exhibits or the related testimony.

III. The ALJ Should Reject Complainants’ Motion to Strike

Contrary to MEC’s claims, the identified portions of Mr. Blumenstock’s rebuttal testimony and exhibits are not “merely rehabilitative.” They do, in fact, offer a response that contradicts, disproves, and tends to weaken MEC witness Comings’ arguments in favor of disallowing costs for projects that the Commission has already partially approved in a prior rate case. Likewise, MEC’s claim regarding lack of access to supporting calculations for Exhibits A-202 (RTB-24) and A-203 (RTB-25) is premature and not factually supported. The information provided in Mr. Blumenstock’s rebuttal testimony is relevant to projects that were included in the Company’s original filing and provide helpful information for the Commission’s consideration that is directly


responsive to the arguments for disallowance raised by MEC. MEC makes no claim in its Motion to Strike that the information provided in the identified rebuttal testimony and exhibits is untrue, misleading, or irrelevant. The ALJ should reject MEC's Motion to Strike.

WHEREFORE, Consumers Energy Company respectfully requests the Administrative Law Judge to deny MEC's Motion to Strike portions of the rebuttal testimony and exhibits of Consumers Energy witness Richard T. Blumenstock.

Respectfully submitted,

CONSUMERS ENERGY COMPANY

Dated: October 29, 2025

By: 

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ATTACHMENT A

Question:

18. Refer to Company response attachment U21870-ST-CE-0004_ATT_0024 regarding the “JGS - Engine 191-306 Overhaul” project. Please provide the supporting calculations for the NPV estimate of \$4,316,758.

Response:

The Company employs a financial model from the Copperleaf Capital Planning Tool to evaluate the economics of our generation projects. The Company has attached a full electronic version of the concept approval as U21870-MNSC-CE-0224_ATT_0002. The NPV estimate of \$4,316,758 is an output of the Copperleaf model. While the Company does not have the ability to download the supporting NPV calculation as an output of the model, the Company has reproduced the NPV modeling. The NPV calculation for this project is reflected on attachment U21870-MNSC-CE-0224_ATT_0003. The NPV is the summation of the financial benefits, the lost generation risk, less the cost. See also an attached document (Attachment U21870-MNSC-CE-0224_ATT_0001) which defines the financial evaluation methodology utilized by the Copperleaf model.

Witness: RICHARD T. BLUMENSTOCK

Date: August 14, 2025

Methodology for Quantifying Capital Investment Risk with Copperleaf Value Models – Consumers Energy

Purpose and scope

This document explains how the Company converts engineering and operational risk into dollar-denominated values for investment evaluation. It is intended for the reader to understand the logic behind the results; it does not require access to internal tools or data libraries. The same expected-value reasoning is applied year by year and results are discounted to present value using the Company's approved discount rate.

Model overview

The Company employs multiple model families; this document illustrates three commonly used examples:

1. Financial Risk Matrix — converts the chance of an adverse event and its consequence into an expected annual cost; value equals the risk avoided by the investment.
2. Lost Generation Risk (Energy Only) — quantifies the dollar value of lost energy (MWh) from derates or outages; value equals the avoided energy loss.
3. Financial Benefits & Costs — prices direct financial effects (costs avoided, revenues, and ongoing costs).

Principal value drivers

In practice, the Financial Risk Matrix and Lost Generation Risk models are the most widely used and account for the majority of risk-mitigation value in the Company's Long-Term Financial Plan. Capacity value lost risk is handled within the Financial Risk Matrix to avoid overlap with energy-only valuation.

Common frame (applies to all models)

- Baseline vs With-Project ("Outcome"): Baseline represents conditions if we do nothing; Outcome represents conditions after the investment. Annual value is the difference:
Annual Value (\$) = Baseline Expected Impact (\$) – Outcome Expected Impact (\$).
- Expected value: Uncertain events are priced by multiplying their consequence (in \$ if they occur) by how likely they are to occur that year. This yields a single expected \$ figure for the year.
- Discounting: After computing annual values across the planning horizon, we calculate NPV using a constant discount rate specified by Company finance policy.
- Evidence base (examples): work orders and repair history; outage/derate logs and time-to-restore; unit operating profile and duty cycle; inspection findings and sensor trends; OEM notices; age/obsolescence; supply-chain lead times; peer and industry

experience (including EPRI guidance); and structured SME judgments recorded through Company procedures.

1) Financial Risk Matrix (general risk in dollars)

What it measures: the expected annual cost of a defined hazard (safety, environmental, compliance, or financial), and the amount of that cost the project removes.

How it works, step by step

- Define the hazard and pathway. We state what can go wrong, how it unfolds, and which impact categories it touches. This ensures the risk we price is specific and non-overlapping with other models.
- Monetize the consequence. For each year, we determine the dollar impact if the event occurs in that year. This can include response and repair cost, regulatory or contractual impacts, and business effects appropriate for that hazard. Values are drawn from Company-maintained sources that reflect current costs and obligations.
- Quantify how often it may occur. For each year, we express likelihood as either a frequency (events per year) or a probability for that year. Figures are derived from the evidence base above and recorded through our governance process.
- Convert uncertainty into dollars. Expected annual risk equals consequence \times likelihood. This yields a single dollar amount for that year under Baseline.
- Reflect the project's effect. With the project in place, severity and/or frequency typically decline. We determine the with-project consequence and likelihood in the same manner and compute the Outcome expected risk.
- Value created. Annual value is the avoided risk (Baseline minus Outcome). We then discount and sum across years to get NPV.

Capacity value lost risk (handled here)

- Use Capacity Calculator outputs for each year to identify the magnitude and timing of potential capacity exposure relative to accreditation or obligations. These exposure drivers are not re-estimated here.
- Monetize the exposure by applying the Company's capacity valuation parameters for the relevant years (market/regulatory cost components for our jurisdiction and obligations). These parameters are maintained internally and updated on defined cycles as conditions change. The result is a dollar consequence if the exposure materializes in that year.
- Account for chance by assigning, for each year, the likelihood that the exposure will materialize as a dollar impact, consistent with the same evidence base and governance protocols used elsewhere.
- Compute expected annual capacity value loss under Baseline and re-compute under Outcome if the project reduces the exposure (magnitude, timing, or likelihood). The difference is the annual value attributable to mitigating capacity value risk.

2) Lost Generation Risk (energy only)

What it measures: the dollar value of lost energy production due to unit derates or full outages and the portion of that loss the project avoids. This model does not address capacity market value or capacity accreditation.

How it works, step by step

- Describe the operational shortfall for each year: either a derate (the unit can run but at reduced MW) or a complete outage (the unit cannot produce). Specify the MW affected and the expected duration to restore normal operation.
- Translate MW and time into energy. Lost MWh per event equals MW affected × 24 hours × number of days, adjusted for how the unit is expected to operate during that period (capacity factor for the affected window). Operating profiles come from Company-maintained sources that reflect expected duty cycles.
- Monetize the lost energy. Multiply lost MWh by the applicable energy value (\$/MWh) for that year (net of costs as appropriate). Energy values are obtained from Company-maintained price/valuation sources refreshed on defined cycles.
- Account for chance. Express how often such a derate/outage is expected in that year (frequency or probability) based on history, condition, and SME protocols, and multiply by the dollar consequence to get the expected annual loss under Baseline.
- Project effect. The project may shorten the duration, reduce the MW affected, reduce the likelihood, or some combination. Recompute the Outcome expected loss with those changes.
- Value created. Annual value is the avoided energy loss; NPV aggregates those annual values.

3) Financial Benefits & Costs

Note: This model does not include capacity value lost risk; those impacts are valued within the Financial Risk Matrix using outputs from the Capacity Calculator.

What it measures: direct financial effects that show up as dollars—costs we avoid, revenues we gain, or ongoing costs attributable to the project.

How it works, step by step

- Identify the financial streams that the project influences (e.g., avoided corrective capex, avoided O&M, incremental revenue, or ongoing costs attributable to the project). Streams are kept distinct to prevent double-counting.
- Size the dollar amounts for each stream by year, using Company-maintained financial and operational sources (e.g., standard labor/material costs, contract terms, or tariff mechanisms).
- Represent uncertainty by assigning a likelihood (0–1) for each stream in each year, following the same governance used elsewhere.

- Compute expected value for each stream and year (amount × likelihood) and sum across streams to obtain the net annual financial effect.
- Value created is the net with-project improvement relative to Baseline, discounted to NPV.

Additional model families employed

- Safety Risk (personnel and public harm, medical/claim costs, and associated operational impacts)
- Regulatory Compliance Risk (violations, penalties, corrective actions, and programmatic impacts)
- Environmental Risk (releases, remediation/response, permitting, and stewardship commitments)
- Other specialized models are applied as warranted by the investment context. All follow the same expected-value logic and governance described in this document.

Relationship to prior business-case practice

- Alignment with prior business-case practice.
 - These value models formalize the same expected-value logic historically used in our narrative business cases (likelihood × impact by year, discounted to present value).
- Structured improvements introduced by Copperleaf.
 - The platform enforces a consistent, systematic structure across all investments: common Baseline vs Outcome framing; governed, Company-maintained input sources updated on defined cycles; a uniform year-by-year treatment of uncertainty; and a single NPV roll-up.
- Implications for portfolio decision-making.
 - This removes variability in author style and assumptions, places projects on a level playing field, enables like-for-like comparison across technologies and sites, and gives leadership a clear portfolio view of risk and value.
- Impact for customers and ratepayers.
 - A more objective, repeatable method for selecting the optimal risk-mitigation portfolio—supporting lower total cost and better reliability outcomes.

Governance, transparency, and QA

- Recorded reference values: For each plant, we keep the values that drive the calculations—Net Energy Value (NEV), Net Demonstrated Capacity (NDC), fuel cost, and capacity factor—and update them on defined cycles as those inputs change. Other supporting engineering context is maintained separately; we don't time-stamp every data point inside the value model.

- Consistency: The same rules are applied to Baseline and Outcome; differences in value come from the project's effect, not from changing the standard.
- Reasonableness checks: Unit consistency (e.g., MW→MWh, \$/MWh→\$), bounds on probabilities, and year-to-year continuity are verified.
- Change control: When inputs are updated, the prior set and the new set are retained; impacts of changes can be traced year by year.



Concept Approval Internal Report

Investment Code GEN002986	Report Start Year 2026	Number of Years 1	Currency Scale Literal
Investment Name JGS - LM Engine ESN 191-306 Repair at GE Depot			Scenario Draft
Value Function		Consumers Energy Value Function	

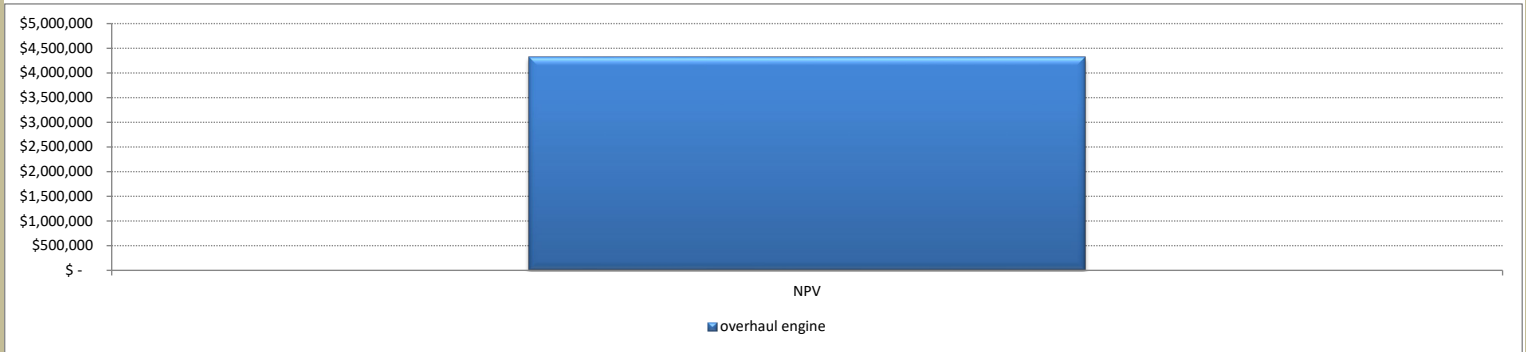
Investment Type	Generation	Planning Portfolio	Jackson
Facility	Jackson / Jackson		
Executive Summary	<p>Engine ESN 191-306 experienced a stall event on 02/09/25 while in the LM5 package, rendering it inoperable and unserviceable. The engine was removed and replaced with a lease engine to restore plant capability. The engine was shipped to GE Depot (Houston) on 03/03/25.</p> <p>Scope Restoration of LM engine ESN 191-306 to make it operable.</p> <p>Objectives Restore LM engine ESN 191-306 to operable condition. Minimize lease engine costs.</p> <p>Planner Recommended Alternative Restoration of LM engine ESN 191-306 to make it operable. Minimize lease engine costs.</p> <p>Model Assumptions There is a 100% chance of unit derate if the engine is not returned before the lease ends. Lease engine cost is calculated based on factory fired hours, varying between ~\$87K/month (low end) and ~\$112K/month (high end) depending on usage. Fees increase by 20% annually, making the repair cost susceptible to changes if delayed. LTSA requires the lease engine to be swapped out within a certain period or incur escalating penalty fees. For planning purposes, an average cost of \$100K/month will be used.</p>		
Last Approver	Approval Date		

Investment Overview

Project Details	Environmental Justice Area	No
	Estimate Class	Class 2
	Rate Case Mapping	Gas Generation
	EPM Managed	No
	Outage Type	Unit - Plant
	Scope	Restoration of LM engine so that it's operable
	Objectives	Restoration of LM engine so that it's operable, minimize lease engine costs.
	Planner Recommended Alternative	Restoration of LM engine so that it's operable, minimize lease engine costs.
Model Assumptions	100% chance of unit derate if we don't get this engine back before lease end.	
	Lease engine cost is a calculation based on factory fired hours. Using last quarter's (Q125) fleet FFH cost, the engine monthly cost would have been ~\$87K which is on the low end for an engine because we don't run as much during that quarter whereas Q324 (~\$112K) is probably on the high end because a lot of times we were running around the clock. Our fees go up 20% annually so pushing it farther out makes the repair cost of 306 susceptible to that cost change. The language in the LTSA states that a lease engine is to be swapped out within a certain period of time of our engine being returned or paying an escalating penalty fee. For planning purposes, an average of \$100k/month will be used.	
Alternative Details	overhaul engine	overhaul engine

Alternative Spend Profile

Name	Status	NPV	Total Spend	Alternative Start Date
overhaul engine	Recommended	\$ 4,316,758	\$ 7,841,636	1/1/2026

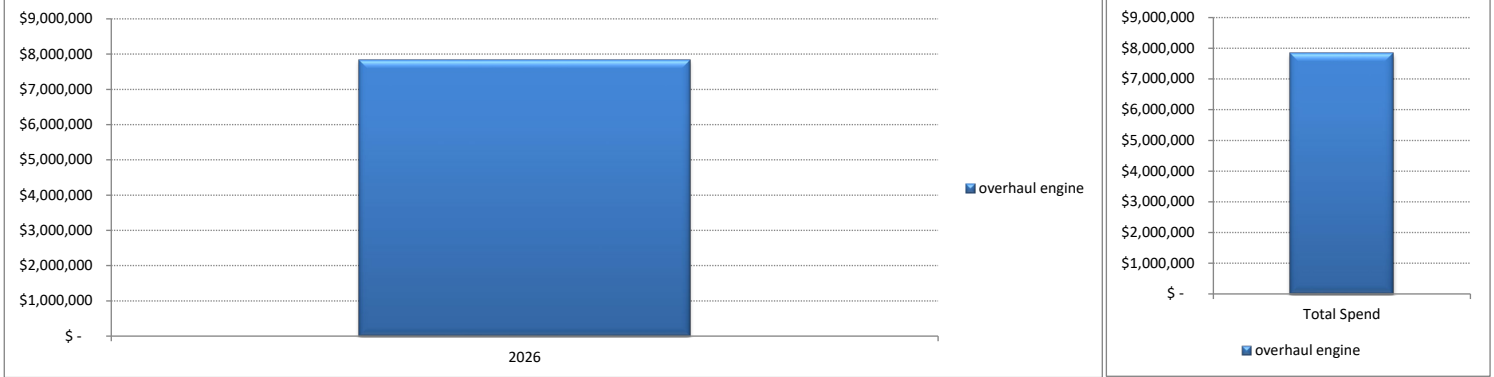


Name	Status	2026
overhaul engine	Recommended	\$ 7,841,636



Concept Approval Internal Report

Investment Code GEN002986	Report Start Year 2026	Number of Years 1	Currency Scale Literal
Investment Name JGS - LM Engine ESN 191-306 Repair at GE Depot			Scenario Draft
Value Function		Consumers Energy Value Function	



Forecasts - Draft (overhaul engine)

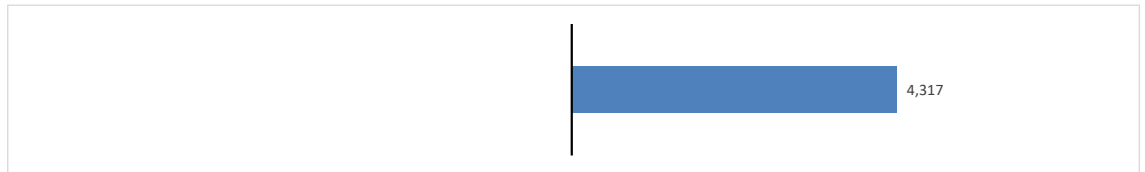
Account Type	2026
Capital	\$ 7,841,636
Cost Of Removal	\$ -
O&M	\$ -

Alternative Value

Name	Status	Total Value	Cost Present Value	Value / \$
overhaul engine	Recommended	\$ 4,317	\$ 7,058,244	0.0006

■ overhaul engine

Total Value (Value Units)



Value by Value Measures (Value Units)

Lost Generation Risk



Cost Avoidance - Capital



Cost Avoidance - O&M





Concept Approval Internal Report

Investment Code
GEN002986

Report Start Year
2026

Number of Years
1

Currency Scale
Literal

Investment Name
JGS - LM Engine ESN 191-306 Repair at GE Depot

Scenario
Draft

Value Function

Consumers Energy Value Function

Total Investment Cost

-7,058



Description

These instructions will discuss how to replicate the calculation that Core Suite does to calculate the total value after performing Net Present Value (NPV) of a measure output on the Alternative Value page.

Net Present Value Analysis

Net Present Value analysis is used to help determine how much an investment, project, or any series of cash flows over time is worth at the present moment.

Value in the future is worth less than value that is received immediately due to the expected growth of money. Core Suite automatically performs this analysis using the standard NPV formula with the first month of the calculation period being the 0th period before calculating the total value measure output.

In order to replicate the value calculation that Core Suite performs, we would need to apply this formula to each monthly measure outputs within the calculated period. Unfortunately, the NPV function in Excel treats the first period as the 1st period instead of the 0th period, so the output value will not be accurate for replicating the Core Suite calculations.

Excel Calculation

The sample attached Excel file contains all the formula needed to perform the Total Value Calculation, to use it:

1. Determine the time period that system is calculating the value measure in
2. Find the start of the cashflow calculation ($i=0$, where i is the discount period), this is the start month of the current fiscal year
- 3 Find the first outcome date, this is where we will start the calculations
- 4 Find the end of the cash flow period, this is the start of the current fiscal year plus the investment value calculation horizon (fill out the months until all the periods are filled until the end of the cash flow period)
- 5 Obtain the monthly values from the yearly values
6. If the measure has different values per year, manual adjust row 3 for the correct yearly amount by diving the yearly amount by 12
7. Obtain the monthly discount rate
8. If there is only one discount rate for the entire period, enter discount rate used for the measure in cell C7
9. If there are multiple annual discount rate, each of them will need to be manually converted into a monthly discount rate and manually added to the formula in the excel sheet in the correct location. It is recommend to add a separate column for the current discount rate of the time period.
10. Adjust the sum ranges to reflect the actual time period of the calculation

Month starts with 12 because Spending starts 12 months after start of current fiscal year

Discount rate (yearly) - update this	7.500%
Discount rate (monthly) - auto-updated	0.006044919

Period (i)

Month (update this with the periods)	12	13	14	15	16	17	18	19	20	21	22	23
Raw (update this with inflated values)	-653469.6667	-653469.6667	-653469.6667	-653469.6667	-653469.6667	-653469.6667	-653469.6667	-653469.6667	-653469.6667	-653469.6667	-653469.6667	-653469.6667
Discounted	-607878.7597	-604226.2609	-600595.7084	-596986.9706	-593399.9161	-589834.4148	-586290.3372	-582767.5545	-579265.9388	-575785.363	-572325.7004	-568886.8256
Date	Jan-26	Feb-26	Mar-26	Apr-26	May-26	Jun-26	Jul-26	Aug-26	Sep-26	Oct-26	Nov-26	Dec-26

Starting from Jan 2025 as '0' \$ (7,058,243.75) <-- simulates the Copperleaf calculation

the NPV function in Excel treats the first cashflow amount as month '1', meaning that it discounts it when it shouldn't, but Copperleaf treats the first cashflow as month '0', which creates a different output between them

Total investment cost from Copperleaf FY26
-7841636

Answer Questionnaires

JGS - LM Engine ESN 191-306 Repair at GE Depot ▶ C overhaul engine

Value Measure Output: All Measures | 2024 To 2034

Value: -7,058 | First Outcome Date: 01/01/2026

Name	Unit	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
Capital - Capital											
Outcome	\$			\$7,841,636							
O&M - O&M											
Outcome	\$										
Cost Of Removal - Cost Of Removal											
Outcome	\$										
Capital And Cost of Removal - Capital											
Outcome	\$			\$7,841,636							
Total Cost - Total Investment Cost											
Outcome	\$			\$7,841,636							

No user input is required for this questionnaire.

Investment Summary

Submit Initiate Workflow Reports Follow Investment

Overview

JGS - LM Engine ESN 191-306 Repair at GE Depot

Engine ESN 191-306 had a stall event on 02/09/25 while in LMS package which made it inoperable and later determined to be unrepairable. The engine was removed from its package and a lease engine was installed so the plant could return to full capability. The engine was shipped from JGS to GE Depot (Houston) on 03/03/25.

Owner: Cummings, Jeffery (Jeffery.Cummings@cmsenergy.com)

Planning Portfolio: Jackson

Stage: Initial

Alternatives

Name	Value	Draft Forecast	Spend Date Range
overhaul engine	4,317	\$7,841,636	Jan FY26 to Dec FY26

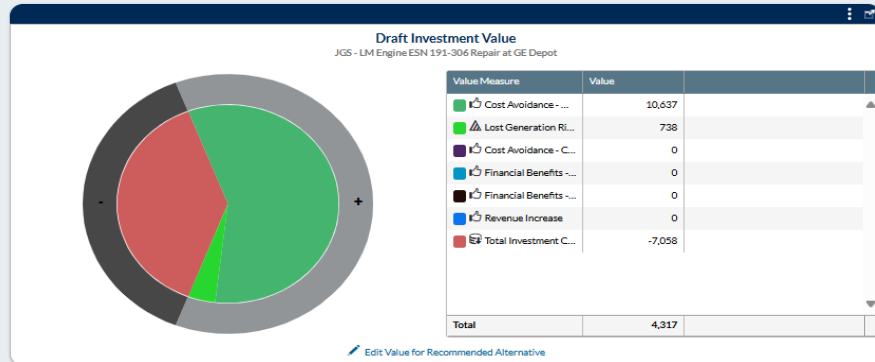
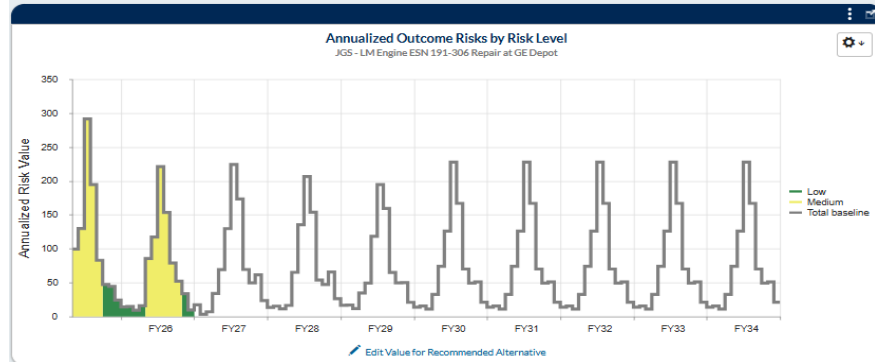
Risks Impacted for overhaul engine

Asset Unique ID	Value Measure	Value Model	Impact Date
	Lost Generation Risk	Lost Generation Risk	01/01/2027

1 - 1 of 1 items

Financial Metrics

Metrics	Value
Cost Present Value	\$7,058,244
Benefit Present Value	\$11,375,002
Net Present Value	\$4,316,758
Payback Period	91 months
Internal Rate Of Return	16.14%
Benefit/Cost Ratio	1.61
Value/Cost Ratio	0.61



STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of)
CONSUMERS ENERGY COMPANY)
for authority to increase its rates for)
the generation and distribution of)
electricity and for other relief.)
_____)

Case No. U-21870

PROOF OF SERVICE

STATE OF MICHIGAN)
) SS
COUNTY OF JACKSON)

Melissa K. Harris, being first duly sworn, deposes and says that she is employed in the Legal Department of Consumers Energy Company; that on October 29, 2025, she served an electronic copy of **Consumers Energy Company’s Response to Michigan Environmental Council’s Motion to Strike** upon the persons listed in Attachment 1 hereto, at the e-mail addresses listed therein.



Melissa K. Harris

Subscribed and sworn to before me this 29th day of October 2025.



Crystal L. Chacon, Notary Public
State of Michigan, County of Eaton
My Commission Expires: 05/25/30
Acting in the County of Jackson

ATTACHMENT 1 TO CASE NO. U-21870

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ATTACHMENT 1 TO CASE NO. U-21870

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