

Founded in 1852
by Sidney Davy Miller

MILLER CANFIELD

Sherri A. Wellman
TEL +1.517.483.4954
FAX +1.517.374.6304
E-MAIL Wellmans@MillerCanfield.com

Miller, Canfield, Paddock and Stone, P.L.C.
120 N. Washington Square, Suite 900
One Michigan Avenue Building
Lansing, Michigan 48933
TEL (517) 487-2070
FAX (517) 374-6304
millercanfield.com

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December 1, 2023

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

Re: Upper Michigan Energy Resource Company
Case No. U-21081

Dear Ms. Felice:

Enclosed for filing is the Application of Upper Michigan Energy Resources Corporation (“UMERC”) requesting approval of the Purchase and Sale Agreement between UMERC and Renegade Solar Energy, LLC and the related Engineering, Procurement and Construction Agreement. Also enclosed is the Affidavit of Richard F. Stasik and supporting Attachments 1-4. The Appearances of Paul M. Collins and Sherri A. Wellman are on record, and each should be included in any future communications. Finally, enclosed for filing is a Proof of Service.

Should you have any questions, please kindly advise.

Very truly yours,

Miller, Canfield, Paddock and Stone, P.L.C.

By: _____
Sherri A. Wellman

SAW:vs
Enclosures
cc w/enc:
Richard Stasik (richard.stasik@wecenergygroup.com)
Koby Bailey (koby.bailey@wecenergygroup.com)
Theodore Eidukas (theodore.eidukas@wecenergygroup.com)

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of)	
UPPER MICHIGAN ENERGY RESOURCES)	
CORPORATION for approval of its integrated)	Case No. U-21081
resource plan pursuant to MCL 460.6t)	
<u>and for other relief.</u>)	

APPLICATION

Upper Michigan Energy Resources Corporation (“UMERC” or the “Company”) requests that the Michigan Public Service Commission (“MPSC” or the “Commission”) grant approval of its Purchase and Sale Agreement (“PSA”) between UMERC and Renegade Solar Energy, LLC, as well as the planned Engineering, Procurement and Construction Agreement (“EPCA”) with Invenergy Constructions Services, LLC (“Invenergy”) and find that the PSA and EPCA, collectively referred to as the “Renegade Solar Project” were reasonably and prudently selected in accordance with the Company’s Integrated Resource Plan (“IRP”) Settlement Agreement, as approved in the Commission’s May 12, 2022 Order Approving Settlement Agreement in Case No. U-21081. In support of this request, UMERC states as follows:

I. Background

1. UMERC is a Michigan jurisdictional regulated utility that provides, among other things, electric service to all retail customers within the former public utility service territories of Wisconsin Electric Power Company (“Wisconsin Electric”) and Wisconsin Public Service Corporation (“WPS Corp”) in the state of Michigan,

2. UMERC provides retail electric service in cities, villages, and townships in the counties of Alger, Baraga, Delta, Dickinson, Gogebic, Houghton, Iron, Marquette, Menominee, and Ontonagon.

3. Pursuant to 1909 PA 106, as amended, MCL 460.551 et seq.; 1909 PA 300, amended, MCL 462.2 et seq.; 1919 PA 419, as amended, MCL 460.51 et seq.; and 1939 PA 3, as amended, MCL 460.1 et seq., UMERC's retail electric business in the state of Michigan is subject to the Commission's jurisdiction.

4. On October 15, 2021, UMERC filed its IRP with the Commission in Case No. U-21081. The Company proposed in its Proposed Course of Action ("PCA") to construct a new 100 MW solar generation facility within UMERC's service territory. In its May 12, 2022, Order Approving Settlement Agreement, the Commission approved a settlement resolving all matters at issue in the Company's IRP, hereafter referred to as the "Settlement Agreement." Among other things, the Settlement Agreement specified the procedures UMERC would use in acquiring the 100 MW of solar generation for the PCA. In Paragraph 14 of the Settlement Agreement, the Company agreed to evaluate projects of various sizes that either individually or in combination could provide the renewable energy credits ("RECs") identified as needed in its IRP filing. The Company also agreed to share all confidential bidding information with Staff pursuant to the terms of the Protective Order issued in Case No. U-21081. Finally, upon selecting a project, pursuant to Paragraph 11 of the Settlement Agreement, the Company agreed to make certain information publicly available. Specifically, UMERC agreed to file an affidavit in the IRP docket that providing the following information, without the identifying information submitted confidentially by the bidders:

- Detail about the project offers the Company has received and documentation that *all* potential projects in the MISO queue in the MIUP pricing zone were considered.
- Detail about any solar in the Company's distribution interconnection queue that would be considered larger than residential scale solar.
- Levelized cost over the depreciable life for all offers received.
- Explanation as to how any tax credits are applied.
- Explanation as to how the Company considered transmission costs in its analysis of project offers. To the extent appropriate, this will include an adjustment to the capital costs for projects in the 2019 or earlier MISO Definitive Planning Process (DPP) queue to include the approximate portion of transmission interconnection costs that will be allocated to UMERC when performing the Levelized Cost of Energy (LCOE) calculations comparing projects.
- Comparison of the 5-year historical levelized cost of projects in the WEC pricing zone to the levelized cost of projects bid into the MIUP pricing zone.
- Comparison of the cost assumed in the UMERC IRP model to the project bids actually received.
- Explanation of the Company's analysis of the project bids, including the evaluation performed by the third-party consultant. This will include identifying the criteria that were considered in the consultant's report. UMERC will include an evaluation of project viability as part of the confidential contract review with Staff.

5. UMERC implemented the selection process set forth in the IRP and selected the Renegade Solar Project. On June 15, 2023, the Company filed the Affidavit of Richard F. Stasik in Case No. U-21081 making the information publicly available concerning cost and the selection process for the Renegade Solar Project, as described in paragraph 4, *supra*.

6. The Company also shared with Staff all confidential bidding information concerning the selection process for the Renegade Solar Project.

7. Since that time the Company has engaged in negotiations with Renegade Solar Energy, LLC and the Invenergy Construction Services, LLC and has agreed upon a confidential

term sheet¹. UMERC believes that the finalization of the PSA and EPCA is imminent and will submit these documents confidentially to the Commission promptly upon execution. In this filing, UMERC is presenting the results of the Company's implementation of this selection process from the Settlement Agreement and requesting that the Commission approve the PSA and EPCA resulting from this process.

II. Implementation of the Selection Process Set Forth in the IRP

8. UMERC initially considered all projects in the Midcontinent Independent System Operator ("MISO") Interconnection Queues for the years 2019, 2020, 2021 and 2022 and identified all renewable energy generation projects that could be available in the Upper Peninsula (*See*, Affidavit of Richard F. Stasik accompanying this Application). For each identified project, UMERC then evaluated the following criteria to determine whether the respective project was likely to cost-effectively meet the need established in the Company's IRP:

- Whether an identified project could be placed in service by the end of 2026.
- Developer experience with large-scale renewable energy projects, including securing land rights, operating remote monitoring facilities, and other operation and maintenance capabilities.
- Developer experience with renewable energy project permitting and Michigan renewable energy projects in general.

(*See*, Affidavit of Richard F. Stasik accompanying this Application).

9. UMERC identified five potential solar projects in the MISO Queue that could be available in the Upper Peninsula. However, two of these projects were eliminated during the initial screening process because one could not be available by the end of 2026, which was the timeframe in which UMERC's need was identified, and the other was no longer commercially available to

¹ UMERC will provide a copy of same under the terms of the Protective Order in this case.

UMERC. UMEREC then solicited bids from the developers of the three remaining projects. This solicitation sought the information necessary to assess which project would provide solar generating capacity and energy consistent with the IRP, while providing a reasonable Levelized Cost of Energy (“LCOE”):

- Total capital cost;
- Total generating capacity;
- Expected MISO interconnection costs;
- Expected capacity factor;
- Estimated initial annual operations and maintenance costs;
- Estimated annual operations and maintenance cost escalation rates;
- Tax Credit eligibility (Production Tax Credits vs. Investment Tax Credits); and,
- Level of Tax credit eligibility of each project.

(*See*, Affidavit of Richard F. Stasik accompanying this Application).

10. All three of the developers submitted bids to UMEREC, to be held confidentially pursuant to the terms of the Protective Order issued in Case No. U-21081. UMEREC used the information in these bids to assess each project economically, which included deriving the expected LCOE, inclusive of the developer-supplied acquisition costs and anticipated operations and maintenance costs. (*See*, Affidavit of Richard F. Stasik accompanying this Application).

LCOE was calculated as the total revenue requirement divided by energy production both discounted over a specified period of time (e.g., asset life or contract length). Attachment 2 to the Affidavit of Richard F. Stasik for the economic evaluation of each project, including the LCOE calculation. Within this attachment, the analysis of each project evaluated is captured on a separate

schedule – Schedule 1A for the Renegade Solar Project, Schedule 2A for J2029. Schedule 3A for J1750. Additionally, this attachment includes a unique schedule for the calculation of the capital revenue requirement for each project: 1B for the Renegade Solar Project, Schedule 2B for J2029. Schedule 3B for J1750.

11. Based on this assessment, UMERC selected the Renegade Solar Project as the one which best met the Company’s need as identified in the IRP.

III. Project Description

12. The Renegade Solar Project is a 100 MW solar facility located in Delta County, Michigan. The project will require approximately 4,000 acres, for which land rights have already been secured. The project will be interconnected with American Transmission Company’s 138 kV transmission system in accordance with the terms and conditions outlined in the MISO Generator Interconnect Agreement executed on April 23, 2021.

13. As reflected in Attachment 1 to the Affidavit, the project is scheduled to have a Commercial Operations Date (“COD”) by December 31, 2026, which is within the MISO Capacity Planning Year beginning May 31, 2026.

14. UMERC will acquire the Renegade Solar Project by executing two inter-connected agreements, the PSA and the EPCA Agreement, pursuant to the terms described in the term sheet.² Execution of and closing on the PSA will result in UMERC acquiring the Renegade Solar Project in its current state, including all design documents/plans, permits, land rights and interconnection rights. Execution of the EPCA will result in UMERC engaging the developer to continue the Renegade Solar Project through the COD, including performing detailed project engineering,

² This filing will be updated with the PSA and EPCA promptly after they have been executed.

procuring the necessary materials (pilings, racking, solar modules, inverters, etc.), and constructing and interconnecting the solar facility. (*See*, Affidavit of Richard F. Stasik accompanying this Application).

IV. Project Costs

15. The total installed capital cost of the Renegade Solar Project is estimated to be \$217.5 million³ or \$2.175 million per MW (\$2,175 / kw). The project is expected to qualify for the base Production Tax Credit (“PTC”) and to provide many benefits, including supporting the Company fulfilling its future renewable energy portfolio standard (“REPS”) requirements while also providing customers with additional price stability, energy reliability, and further reducing the Company’s greenhouse gas emissions accordance with the approved IRP. The total lifetime cost of the project is approximately \$497.4 million in nominal dollars or \$89.67/MWh LCOE, including the impact of the available tax credits. (*See*, Affidavit of Richard F. Stasik accompanying this Application).

16. Although the LCOE for the Renegade Solar Project is higher than what was modeled in the IRP, it is reasonable in comparison to the cost of the other bids and given the recent impacts of inflation on solar projects throughout the United States. While assessing the LCOE for actual bids for all of the Upper Peninsula solar projects evaluated, UMEREC noted that all were higher than the LOCE assumed in UMEREC’s IRP. This is due to historically high inflation that

³ Certain additional costs will be incurred, including legal fees and internal labor to coordinate the acquisition and construction of the selected project. These costs would be incurred regardless of the project selected and were not included in the economic evaluation of the three projects. Because these costs would be nearly identical for any project, their inclusion or exclusion does not impact the resulting analyses comparing the relative economics of the projects in Attachment 2 to the Affidavit and subsequent analysis of the cost and value of the project as shown in Attachment 3 to the Affidavit. The schedule of these total estimated costs, including the Owners’ Costs and sales taxes, is included in Attachment 4 to the Affidavit. Total cost, inclusive of these costs, is estimated to be \$226.2 million.

occurred in 2022 and continued into 2023, which was not foreseeable at the time the IRP was developed in 2021. When adjusted for the recent inflation, the LCOE assumed in the IRP is within the range of the actual bids, including for the Renegade Solar Project. (*See*, Affidavit of Richard F. Stasik accompanying this Application).

V. Project Benefits

17. The cost of a new supply asset is only part of the impact to UMEREC customer bills. The Company must also consider the offsetting market value of the asset. The consideration of both cost of the asset and the corresponding value can be achieved through evaluating the net cost. Such a calculation provides a more comprehensive assessment of the overall cost or benefit to customers in a given year and over the life of the asset. Attachment 3 to the Affidavit, line 31 shows the 30-year subtotals for expected generation, revenue requirements (in nominal dollars), energy, capacity, and REC value, this is calculated by summing lines 1 to 30. Additionally for each component, line 32 shows the net present value of the 30-year costs or value streams and line 33 shows the impact of each component of the calculated LCOE for the Renegade Solar Project.

18. As shown in Attachment 3 to the Affidavit, the Renegade Solar Project has a projected energy, capacity and REC total lifetime market value of approximately \$552.8 million. The expected generation in MWh and expected capacity in ZRC-year (based on MISO solar class average) are shown in columns (J) and (L), respectively. Column (H) shows the expected cost, or revenue requirement, for each year of the plant, which includes among other things: capital expenditures, Operating and Maintenance (“O&M”) expenditures, and depreciation less PTCs. The expected energy value in \$/MWh, capacity value in \$/ZRCyear, are provided in columns (J), (M), respectively. The value of each REC forecasted to be generated by the Renegade Solar Project

was modeled at a value of \$1.50. Column (P) shows the expected market value, or combined energy, capacity and REC value, for each year of the plant.

19. The Renegade Solar Project will also provide the following benefits to UMERC and the Company's customers, beyond the market value described above:

- The Renegade Solar Project supports the Company fulfilling its future REPS requirements while also providing customers with additional price stability, energy reliability, and further reducing the Company's reliance on fossil fuels and reducing carbon emissions as identified in the Company's IRP PCA;
- The Renegade Solar Project was only selected after a comprehensive financial analysis of available solar generating resources available to meet the Company's IRP PCA in accordance with the Company's IRP Settlement Agreement; and,
- The Company will receive the Michigan-sourced RECs produced by the facility to support its REPS obligations, as noted above, at no incremental cost to customers.

(See, Affidavit of Richard F. Stasik accompanying this Application for a full description of benefits).

VI. Accounting Approval

20. The Company is also seeking Commission authorization for an Allowance for Funds Used During Construction ("AFUDC") on 100% of the Construction Work In Progress ("CWIP") balance during construction of the Renegade Solar Project. The Company makes this request because this accounting approval will provide a small utility like UMERC with an effective tool for financing the construction of the Renegade Solar Project, which is a significant investment for a utility of UMERC's size, and not increasing customer rates until after UMERC has placed the Renegade Solar Project in service.

VI. Conclusion

21. The Company is seeking Commission approval of the PSA and the EPCA for the Renegade Solar Project and a determination from the Commission that the Renegade Project was reasonably and prudently selected in accordance with the terms of the Company's IRP Settlement Agreement, as approved by the Commission's May 12, 2022 Order Approving Settlement Agreement in Case No. U-21081. As stated, the purpose of this filing is to give the parties to the PSA and EPCA timely assurance that the Commission deems the PSA and EPCA to be reasonably and prudently selected as the parties begin performing their respective obligations, including the payment of milestone payments, and commencing construction as stated in Attachment 1 to the Affidavit.

22. As explained above, and in the Affidavit of Richard F. Stasik filed in support of this Application, the Renegade Solar Project is being acquired in a manner consistent with the requirements set forth in the IRP Settlement Agreement approved by the Commission in its May 12, 2022 Order Approving Settlement Agreement in Case No. U-21081, and is at a cost which is consistent, when adjusted for unforeseeable inflation, with the modeled solar resource costs in the Company's IRP PCA.

23. The Company is also seeking authority for AFUDC on 100% of CWIP to support the Company's need to finance the Renegade Solar Project while it is being constructed.

24. Finally, UMERL respectfully requests that the Commission approve the relief requested in this Application on an ex parte basis without the time and expense of a public hearing. By seeking ex parte approval of the Renegade Solar Project, the Company is not seeking rate recovery related to the PSA and EPCA in this filing. UMERL intends to present its request for rate recovery related to the PSA and EPCA in future electric general rate case proceedings.

WHEREFORE, Upper Michigan Energy Resources Corporation respectfully requests that the Michigan Public Service Commission issue its ex parte order,

A. Granting approval of the Purchase and Sale Agreement and Engineering, Procurement, and Construction Agreement and finding that the Renegade Solar Project was reasonably and prudently selected in accordance with the May 12, 2022 Order Approving Settlement Agreement in Case No. U-21081;

B. Granting authorization of for an Allowance for Funds Used During Construction on 100% of the Construction Work In Progress balance during construction of the Renegade Solar Project; and

C. Granting Upper Michigan Energy Resources Corporation such other and further relief as is lawful and appropriate.

Respectfully submitted,

UPPER MICHIGAN ENERGY RESOURCES CORPORATION

Dated: December 1, 2023

By: _____
One of Its Attorneys
Sherri A. Wellman (P38989)
Paul M. Collins (P69719)
MILLER, CANFIELD, PADDOCK AND STONE, P.L.C.
One Michigan Avenue, Suite 900
Lansing, MI 48933
(517) 487-2070

STATE OF MICHIGAN
BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

* * * * *

In the matter of the application of **UPPER MICHIGAN**)
ENERGY RESOURCES CORPORATION for approval)
of its integrated resource plan pursuant to MCL 460.6t) Case No. U- 21081
and for other relief.)
_____)

AFFIDAVIT OF RICHARD F. STASIK

STATE OF WISCONSIN)
) SS.
COUNTY OF MILWAUKEE)

I Richard F. Stasik, being first duly sworn, state as follows:

1. I am Director – State Regulatory Affairs for WEC Energy Group (“WEC”). WEC is the parent company of Upper Michigan Energy Resources Corporation (“UMERC” or the “Company”). In this capacity I am responsible for overseeing and managing WEC’s operating utilities’ regulatory matters in the states of Wisconsin, Michigan, and Minnesota, including the regulatory matters of UMEREC.

2. On May 12, 2022, the Michigan Public Service Commission (“MPSC” or “Commission”) issued its Order Approving Settlement Agreement in the Company’s Integrated Resources Plan in Case No. U-21081 (“IRP Settlement Agreement”).

3. Over the last year, consistent with the terms of the IRP Settlement Agreement, UMEREC engaged in procuring a new source of renewable energy generation capacity which resulted in the selection and negotiation of (i) a Purchase and Sale Agreement (“PSA”) between

Renegade Solar Energy, LLC and U MERC, and (ii) an Engineering, Procurement and Construction Agreement (“EPCA”) between Invenergy Construction Services, LLC (“Invenergy”) and U MERC. Pursuant to the terms of the PSA and EPCA, U MERC will own a 100 MW solar generation facility, which is consistent with generation needs identified in the IRP Settlement Agreement. The Company identifies this new source of renewable energy generation capacity as the Renegade Solar Project.

4. The Renegade Solar Project will be in Delta County, Michigan. It will require approximately 4,000 acres, for which land rights have already been secured. It will be interconnected with American Transmission Company’s 138 kV transmission system in accordance with the terms and conditions outlined in Midcontinent Independent System Operator, Inc. (“MISO”) Generator Interconnect Agreement (“GIA”) executed on April 23, 2021.

5. Pursuant to the terms of the PSA, U MERC will acquire the Renegade Solar Project in its current state, including all design documents / plans, permits, land rights and interconnection rights. Pursuant to the terms of the EPCA, Invenergy will perform detailed engineering, procure materials (pilings, racking, solar modules, inverters, etc.), and construct the Renegade Solar Project.

6. The Renegade Solar Project is scheduled to have a Commercial Operation Date (“COD”) by December 31, 2026, which is within the MISO Capacity Planning Year beginning May 31, 2026. See Attachment 1 hereto for the Acquisition and Construction Schedule.

7. The total installed capital cost of the Renegade Solar Project is estimated to be \$217.5 million or \$2.175 million per MW (\$2,175 / kw). The project is expected to qualify for the base Production Tax Credit (“PTC”). Although the project acquisition and construction costs of \$217.5 million have not changed as of the date of this Affidavit, there are additional costs that will

be incurred, including legal fees and internal labor to coordinate the acquisition and construction of the Renegade Solar Project. These costs would be incurred regardless of the project selected and were not included in the economic evaluation of the three viable projects as described below, because these costs would be nearly identical for any project, their inclusion or exclusion does not impact the resulting analysis that, as addressed below, compares the relative economics of the projects. The schedule of these total estimated costs of the Renegade Solar Project, including the owners' costs and sales taxes, is included in Attachment 4 hereto, the Schedule of Total Acquisition Costs, including Owners Costs and Sales Taxes. The total cost of the Renegade Solar Project, inclusive of these costs, is estimated to be \$226.2 million.

8. The Renegade Solar Project will support the Company's future renewable energy portfolio standard ("REPS") requirements while also providing customers with additional price stability, energy reliability, and further reducing the Company's greenhouse gas emissions accordance with the approved IRP.

9. The selection of the Renegade Solar Project was a direct result of evaluating all renewable generation projects available in the active MISO Queues and soliciting project offers from the developers of all such projects that would be consistent with the understandings reached in the IRP Settlement Agreement; sufficient size and which could be reasonably placed in service to meet UMEREC's needed timeframe of no later than December 2026. Specifically, as agreed upon by all parties to IRP Settlement Agreement, UMEREC solicited potential bids from all generation facilities that were actively in the MISO interconnection queue that could be placed in service no later than December 2026, which is when UMEREC's need for the 100 MW of solar generating capacity was identified in the Proposed Course of Action ("PCA"), as included in the Commission-approved IRP Settlement Agreement. The Company identified Renegade Solar Project as the

resource that meets its customers' identified need and is the most economical of the available projects.

10. Specifically, to start the process of evaluating potential projects, UMERC first reviewed the different projects in the MISO Interconnection queues for the years 2019, 2020, 2021, and 2022 to identify all projects that could be available in the Upper Peninsula of Michigan. This was the population of projects that were initially considered by the Company. The next step in the process was to assess the developer of each of those projects to ensure that the developer could deliver a project, cost-effectively, for UMERC's customers. The key criteria used to perform this evaluation, included assessing whether each project's developer had the following experience, or the associated project met the associated criteria:

- Large scale solar project development experience along with developer longevity;
- Remote monitoring facilities;
- Operations and maintenance capabilities and experience;
- Expertise in securing necessary land rights;
- Michigan permitting experience; and
- Project could be in service by the end of 2026.

Once the list of projects that were proposed by developers with projects possessing the above capabilities was identified, UMERC contacted each developer soliciting specific information related to each project. The information sought included all of the information that would be required to assess which project would provide generating capacity and energy consistent with the needs of UMERC's customers consistent with the 2021 IRP, while providing a reasonable Levelized Cost of Energy ("LCOE"). This information included the following for each project:

- Total capital cost;
- Total generating capacity;
- Expected MISO interconnection costs;
- Expected capacity factor;
- Estimated initial annual operations and maintenance costs;
- Estimated annual operations and maintenance cost escalation rates;
- Tax Credit eligibility (Production Tax Credits vs. Investment Tax Credits); and,
- Level of Tax credit eligibility of each project.

Using this information, an LCOE for each project was calculated. This procurement approach is consistent with the process that has been used by UMERC’s affiliated utility operating companies Wisconsin Electric Power Company (“WEPCO”) and Wisconsin Public Service Corporation (“WPS Corp”) to select renewables projects that were approved by the Public Service Commission of Wisconsin (“PSCW”) multiple times over the past several years.

11. UMERC evaluated the following projects, which were included in the active MISO interconnection queue for the Upper Peninsula of Michigan at the time UMERC started its evaluation:

Project (If Available)	MISO Queue Position	MISO Queue Cycle
Renegade	J1251	2019
	J1750	2020
	J2029	2021
	J814 & J2316	2020 & 2021
	J2678	2022

There were no projects in the UMERC's distribution interconnection queue that were larger than residential scale. There were two projects that were not considered after the initial evaluation was completed. Each project was no longer considered for different reasons. For the first project, Groveland Mines (J814 & J 2316), UMERC requested the information needed to further evaluate the project but was informed by the developer that the project was not commercially available for acquisition by UMERC. The second project that was not further considered is J2678. This project was not further evaluated because that project would not be able to be placed in service by UMERC's required date of December 31, 2026.

Bids concerning the three viable projects that were evaluated and representing over 300 MW of nameplate capacity, were submitted by the associated developers, on a confidential basis, to UMERC for evaluation subject to the criteria discuss in paragraph 10 of this Affidavit.

12. After UMERC applied its review criteria and performed the modeling to assess each viable project, it determined that the Renegade Solar Project would (a) provide the identified need of 100 MW of solar generating capacity, and the associated energy, as identified in the IRP Settlement Agreement, and (b) had an LCOE that was the similar to or lower than the two other projects for which economic evaluation was completed. See Attachment 2 hereto for the Summary of Forecast Cost and LCOE of projects evaluated on an economic basis. Although project J1750 had a lower LCOE, its size was nearly 50% more than UMERC's customers' needs. And, because this project was larger than needed, acquiring it would have resulted in increased total costs to UMERC's customers, without providing an adequate amount of corresponding value to justify those additional costs.

13. UMEREC chose to use the PSA and EPCA transaction structure over alternative acquisition models because of its many advantages and because the same approach is used by its affiliated utility companies in Wisconsin. One key advantage is that the utility takes ownership of the project's development assets up front. These assets are the key to having a viable project and securing them earlier is desirable. The structure also enables the utility to take ownership of project's physical assets as construction progresses, while making progress payments which reduce contractor financing cost and thus the price for the project. The EPCA has also been drafted to reduce the amount of construction period risk born by the utility and is like the Built to Own Transfer contract risk profile. The PSA and EPCA approach has been used and approved by the PSCW multiple times for WEPCO and WPS Corp.

14. The Renegade Solar Project will result in a total lifetime cost of approximately \$497.4 million in nominal dollars or \$89.67/MWh levelized cost of energy (LCOE), including the impact of the available tax credits. LCOE is calculated as the total revenue requirement divided by energy production both discounted over a specified period of time (e.g., asset life or contract length). Attachment 2 reflects the economic evaluation of each project, including the LCOE calculation: The analysis of each project is evaluated on a separate schedule – Schedule 1A for the Renegade Solar Project, Schedule 2A for J2029. Schedule 3A for J1750. Additionally, this attachment includes a unique schedule for the calculation of the capital revenue requirement for each project: 1B for the Renegade Solar Project, Schedule 2B for J2029. Schedule 3B for J1750.

15. The Renegade Solar Project has a projected energy, capacity, and Renewable Energy Credit ("REC") total lifetime market value of approximately \$552.8 million. See Attachment 3 hereto for the Revenue Requirement and Market Value of Renegade Solar Project. The expected generation in MWh and expected capacity in ZRC-year (based on MISO solar class

average) are shown in columns (J) and (L), respectively. Column (H) shows the expected cost, or revenue requirement, for each year of the plant, which includes among other things: capital expenditures, Operating and Maintenance (“O&M”) expenditures, and depreciation less PTCs. The expected energy value in \$/MWh, capacity value in \$/ZRCyear, are provided in columns (J), (M), respectively. The value of each REC forecasted to be generated by the Renegade Solar Project was modeled at a value of \$1.50. Column (P) shows the expected market value, or combined energy, capacity, and REC value, for each year of the plant. Attachment 3, line 31 shows the 30-year subtotals for expected generation, revenue requirements (in nominal dollars), energy, capacity, and REC value, this is calculated by summing lines 1 to 30. Additionally for each component, line 32 shows the net present value of the 30-year costs or value streams and line 33 shows the impact of each component of the calculated LCOE for the Renegade Solar Project.

16. The market value of the Renegade Solar Project is an important consideration when evaluating its benefit to customers because the cost of a new supply asset is only part of the impact to UMERC customer bills. UMERC must also consider the offsetting market value of the asset. The consideration of both cost of the asset and the corresponding value can be achieved through evaluating the net cost. Such a calculation provides a more comprehensive assessment of the overall cost or benefit to customers in a given year and over the life of the asset.

17. Although the LCOE assumed in the 2021 IRP was \$72.44, UMERC has determined that the LCOE for the Renegade Solar Project is reasonable because when adjusted for the recent inflation, the LCOE assumed in the 2021 IRP is within range of the actual bids. UMERC did not anticipate the historically high inflation that occurred in 2022 on solar projects through the United States and has continued into 2023 at the time the IRP was developed in 2021.

18. The Renegade Solar Project will provide benefits to UMEREC, its customers, and the surrounding communities where the Renegade Solar Project will be located. The Renegade Solar Project will provide additional energy to UMEREC's generation portfolio. By locating this renewable generation in the same load zone as UMEREC's load, the transmission losses for this energy and the price of energy are reduced -- providing higher value to UMEREC's customers. The new solar generation will also help UMEREC to meet the Michigan REPS, in addition to providing system voltage support improving local reliability and even further reduce carbon emissions, and certainly, solar investments provide energy with no fuel costs. Fuel price forecasts affect both the cost of energy produced from the gas-fueled supply options and also the price of energy (Locational Marginal Prices or "LMPs") in MISO and the Upper Peninsula. Locating renewable generation near the UMEREC load will reduce LMPs which benefits all UMEREC customers. Undoubtedly, Renegade Solar Project is reasonable and prudent as it will reduce fuel cost and mitigate market risk related to higher market prices for natural gas and/or coal used as fuel for generation. UMEREC will need fewer MISO market purchases with this increase in company-owned generation. Adding this generation will serve as a prudent hedge against market volatility and reduce UMEREC's customers' exposure to market energy price volatility. The benefits of the solar generating facility will also include the potential for reduced output from the Mihm and Kuester RICE plants because of future greenhouse emission reduction efforts. Moreover, solar will improve local reliability in the Upper Peninsula through system voltage support. Further, adding solar generating facilities will reduce the risks associated with the purchases of future RECs required in the REPS.

In summary:

- The Renegade Solar Project supports the Company fulfilling its future renewable portfolio standard (RPS) requirements while also providing customers with additional price stability, energy reliability, and further reducing the Company's reliance on fossil fuels and reducing carbon emissions with the Company's IRP PCA;
- The Renegade Solar Project was only selected after a comprehensive financial analysis of available solar generating resources available to meet the Company's IRP PCA in accordance with the Company's IRP Settlement Agreement and,
- The Company will receive the Michigan-sourced RECs produced by the facility to support its REPS obligations, as noted above, at no incremental cost to customers.

19. Further, as set forth in the Application, UMEREC is seeking Commission authorization for an Allowance for Funds Used During Construction on 100% of the Construction Work In Progress balance during construction of the Renegade Solar Project because it provides effective support for UMEREC, as a small utility, to finance the construction of the project while also only including any costs of the project in customer rates after the Renegade Solar Project is constructed and serving customers. Moreover, such practice is commonplace for the PSCW in connection with projects of this magnitude and required level of investment.

20. Finally, UMEREC believes that the finalization of the PSA and EPCA is imminent, and will promptly submit these agreements on a confidential basis in conjunction with another affidavit to the Commission in this docket.

FURTHER AFFIANT SAYETH NOT

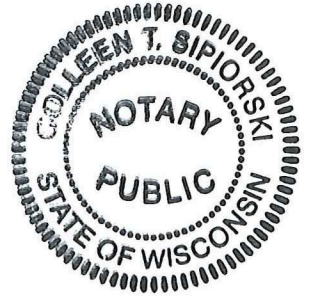


Richard F. Stasik

Subscribed and sworn to before me by Richard F. Stasik this 1st day of December, 2023.



Notary Public
Brown County, WI
Commission Expires April 16, 2025



Attachment 1

Schedule of Renegade Solar Project Activities

<u>Date</u>	<u>Activity</u>
12/1/2023	File Ex-Parte Application for Michigan Public Service Commission Approval
12/26/2023	Execute Asset Purchase Agreement
6/28/2024	Receive Michigan Public Service Commission Approval of Ex-Parte Application
7/1/2024	Close on Asset Purchase Agreement
7/1/2024	Execute Engineering, Procurement and Construction Agreement
7/1/2024	Provide EPC Contractor / Developer Full Notice to Proceed
10/15/2024	Commencement of Site Preparation / Civil Work
3/25/2025	Commencement of Substation Construction
4/5/2025	Commencement of Piling Installation
7/8/2025	Commencement of Racking Installation
11/18/2025	Commencement of Solar Module Installation
6/5/2026	Substation Energization
8/19/2026	Mechanical Completion
9/10/2026	Functional Testing Begins
10/9/2026	Project Commissioning Begins
12/31/2026	Project Substantial Completion / In-Service

Attachment 2 - CONFIDENTIAL

Attachment 3

	Revenue Requirement								Energy, Capacity & REC Value									
	Book Depreciation	Return on Debt	Return on Equity	Income Tax	PTC	Inverter Replacement	O&M	Total Revenue Requirement	Solar MWh	Average LMP (\$/MWh)	Energy Market Value	ZRCs	Forecasted Capacity Value (\$ / MW)	Forecasted Capacity Value (Total)	REC Value	Total Forecasted Value	Net Cost / (Benefit)	
1	Year 1	\$ 7,250	\$ 3,955	\$ 12,441	\$ 4,658	\$ (7,509)	\$ -	\$ 2,413	\$ 23,209	202,356	\$ 50.35	\$ 10,188	23.5	\$ 102,240	\$ 2,403	\$ 304	\$ 12,894	\$ 10,315
2	Year 2	\$ 7,250	\$ 3,661	\$ 11,517	\$ 4,312	\$ (7,748)	\$ -	\$ 2,462	\$ 21,454	201,648	\$ 46.28	\$ 9,332	23.5	\$ 104,540	\$ 2,457	\$ 309	\$ 12,098	\$ 9,356
3	Year 3	\$ 7,250	\$ 3,247	\$ 10,215	\$ 3,824	\$ (7,710)	\$ -	\$ 2,511	\$ 19,338	200,942	\$ 43.91	\$ 8,823	23.5	\$ 106,893	\$ 2,512	\$ 308	\$ 11,643	\$ 7,694
4	Year 4	\$ 7,250	\$ 2,958	\$ 9,305	\$ 3,484	\$ (7,671)	\$ -	\$ 2,561	\$ 17,886	200,239	\$ 45.30	\$ 9,071	23.5	\$ 109,298	\$ 2,568	\$ 307	\$ 11,947	\$ 5,940
5	Year 5	\$ 7,250	\$ 2,744	\$ 8,631	\$ 3,231	\$ (7,905)	\$ -	\$ 2,612	\$ 16,563	199,538	\$ 47.75	\$ 9,520	23.5	\$ 111,757	\$ 2,626	\$ 306	\$ 12,461	\$ 4,102
6	Year 6	\$ 7,250	\$ 2,530	\$ 7,958	\$ 2,979	\$ (7,866)	\$ -	\$ 2,665	\$ 15,516	198,839	\$ 51.03	\$ 10,147	23.5	\$ 114,271	\$ 2,685	\$ 305	\$ 13,137	\$ 2,380
7	Year 7	\$ 7,250	\$ 2,373	\$ 7,463	\$ 2,794	\$ (8,096)	\$ -	\$ 2,718	\$ 14,501	198,144	\$ 54.99	\$ 10,896	23.5	\$ 116,842	\$ 2,746	\$ 304	\$ 13,946	\$ 555
8	Year 8	\$ 7,250	\$ 2,271	\$ 7,144	\$ 2,675	\$ (8,056)	\$ -	\$ 2,772	\$ 14,057	197,450	\$ 59.89	\$ 11,826	23.5	\$ 119,471	\$ 2,808	\$ 303	\$ 14,936	\$ (879)
9	Year 9	\$ 7,250	\$ 2,171	\$ 6,827	\$ 2,556	\$ (8,283)	\$ -	\$ 2,828	\$ 13,349	196,759	\$ 63.97	\$ 12,587	23.5	\$ 122,160	\$ 2,871	\$ 302	\$ 15,760	\$ (2,411)
10	Year 10	\$ 7,250	\$ 2,070	\$ 6,510	\$ 2,438	\$ (8,507)	\$ -	\$ 2,884	\$ 12,645	196,070	\$ 67.47	\$ 13,229	23.5	\$ 124,908	\$ 2,935	\$ 301	\$ 16,465	\$ (3,820)
11	Year 11	\$ 7,250	\$ 1,969	\$ 6,194	\$ 2,319	\$ -	\$ -	\$ 2,942	\$ 20,674	195,384	\$ 69.22	\$ 13,525	23.5	\$ 127,719	\$ 3,001	\$ 300	\$ 16,836	\$ 3,848
12	Year 12	\$ 7,250	\$ 1,868	\$ 5,877	\$ 2,200	\$ -	\$ -	\$ 3,001	\$ 20,196	194,700	\$ 71.61	\$ 13,943	23.5	\$ 130,592	\$ 3,069	\$ 299	\$ 17,310	\$ 2,886
13	Year 13	\$ 7,250	\$ 1,768	\$ 5,560	\$ 2,082	\$ -	\$ -	\$ 3,061	\$ 19,720	194,019	\$ 75.75	\$ 14,697	23.5	\$ 133,531	\$ 3,138	\$ 298	\$ 18,132	\$ 1,588
14	Year 14	\$ 7,250	\$ 1,667	\$ 5,243	\$ 1,963	\$ -	\$ -	\$ 3,122	\$ 19,245	193,340	\$ 75.89	\$ 15,673	23.5	\$ 136,535	\$ 3,209	\$ 297	\$ 18,179	\$ 1,066
15	Year 15	\$ 7,250	\$ 1,566	\$ 4,926	\$ 1,844	\$ -	\$ 3,620	\$ 3,185	\$ 22,391	192,663	\$ 80.66	\$ 15,540	23.5	\$ 139,607	\$ 3,281	\$ 295	\$ 19,116	\$ 3,274
16	Year 16	\$ 7,250	\$ 1,465	\$ 4,609	\$ 1,726	\$ -	\$ -	\$ 3,248	\$ 18,299	191,989	\$ 84.24	\$ 16,172	23.5	\$ 142,748	\$ 3,355	\$ 294	\$ 19,821	\$ (1,523)
17	Year 17	\$ 7,250	\$ 1,365	\$ 4,292	\$ 1,607	\$ -	\$ -	\$ 3,313	\$ 17,827	191,317	\$ 85.97	\$ 16,448	23.5	\$ 145,960	\$ 3,430	\$ 293	\$ 20,171	\$ (2,344)
18	Year 18	\$ 7,250	\$ 1,264	\$ 3,976	\$ 1,488	\$ -	\$ -	\$ 3,379	\$ 17,357	190,647	\$ 86.50	\$ 16,492	23.5	\$ 149,244	\$ 3,507	\$ 292	\$ 20,291	\$ (2,934)
19	Year 19	\$ 7,250	\$ 1,163	\$ 3,659	\$ 1,370	\$ -	\$ -	\$ 3,447	\$ 16,889	189,980	\$ 87.62	\$ 16,647	23.5	\$ 152,602	\$ 3,586	\$ 291	\$ 20,524	\$ (3,636)
20	Year 20	\$ 7,250	\$ 1,062	\$ 3,342	\$ 1,251	\$ -	\$ -	\$ 3,516	\$ 16,421	189,315	\$ 89.53	\$ 16,949	23.5	\$ 156,036	\$ 3,667	\$ 290	\$ 20,906	\$ (4,484)
21	Year 21	\$ 7,250	\$ 962	\$ 3,025	\$ 1,133	\$ -	\$ -	\$ 3,586	\$ 15,956	188,652	\$ 91.46	\$ 17,253	23.5	\$ 159,546	\$ 3,749	\$ 289	\$ 21,292	\$ (5,336)
22	Year 22	\$ 7,250	\$ 863	\$ 2,716	\$ 1,017	\$ -	\$ -	\$ 3,658	\$ 15,504	187,992	\$ 92.64	\$ 17,416	23.5	\$ 163,136	\$ 3,834	\$ 288	\$ 21,538	\$ (6,034)
23	Year 23	\$ 7,250	\$ 767	\$ 2,414	\$ 904	\$ -	\$ -	\$ 3,731	\$ 15,066	187,334	\$ 94.20	\$ 17,646	23.5	\$ 166,807	\$ 3,920	\$ 287	\$ 21,854	\$ (6,787)
24	Year 24	\$ 7,250	\$ 672	\$ 2,112	\$ 791	\$ -	\$ -	\$ 3,806	\$ 14,630	186,678	\$ 94.69	\$ 17,676	23.5	\$ 170,560	\$ 4,008	\$ 286	\$ 22,170	\$ (7,340)
25	Year 25	\$ 7,250	\$ 576	\$ 1,810	\$ 678	\$ -	\$ -	\$ 3,882	\$ 14,196	186,025	\$ 96.49	\$ 17,949	23.5	\$ 174,398	\$ 4,098	\$ 285	\$ 22,333	\$ (8,137)
26	Year 26	\$ 7,250	\$ 480	\$ 1,509	\$ 565	\$ -	\$ -	\$ 3,960	\$ 13,763	185,374	\$ 98.32	\$ 18,226	23.5	\$ 178,322	\$ 4,191	\$ 284	\$ 22,701	\$ (8,938)
27	Year 27	\$ 7,250	\$ 384	\$ 1,207	\$ 452	\$ -	\$ -	\$ 4,039	\$ 13,331	184,725	\$ 100.19	\$ 18,508	23.5	\$ 182,334	\$ 4,285	\$ 283	\$ 23,076	\$ (9,745)
28	Year 28	\$ 7,250	\$ 288	\$ 905	\$ 339	\$ -	\$ -	\$ 4,120	\$ 12,901	184,079	\$ 102.10	\$ 18,794	23.5	\$ 186,436	\$ 4,381	\$ 282	\$ 23,458	\$ (10,556)
29	Year 29	\$ 7,250	\$ 192	\$ 603	\$ 226	\$ -	\$ -	\$ 4,202	\$ 12,473	183,434	\$ 104.04	\$ 19,084	23.5	\$ 190,631	\$ 4,480	\$ 281	\$ 23,846	\$ (11,372)
30	Year 30	\$ 7,250	\$ 96	\$ 302	\$ 113	\$ -	\$ -	\$ 4,286	\$ 12,047	182,792	\$ 106.02	\$ 19,379	23.5	\$ 194,920	\$ 4,581	\$ 280	\$ 24,240	\$ (12,194)
31	Nominal Total	\$ 217,500	\$ 48,417	\$ 152,291	\$ 57,018	\$ (79,352)	\$ 3,620	\$ 97,910	\$ 497,404		\$ 442,646			\$ 101,380	\$ 8,847	\$ 552,872	\$ (55,468)	
32	Net Present Value	\$ 85,293	\$ 26,191	\$ 82,380	\$ 30,843	\$ (53,988)	\$ 1,217	\$ 34,651	\$ 206,587		\$ 150,187			\$ 35,418	\$ 3,527	\$ 189,133	\$ 17,454	
33	Levelized \$/MWh	\$ 37.02	\$ 11.37	\$ 35.76	\$ 13.39	\$ (23.43)	\$ 0.53	\$ 15.04	\$ 89.67		\$ 65.19			\$ 15.37	\$ 1.53	\$ 82.09	\$ 7.58	

Attachment 4
Schedule of Renegade Solar Project Costs

	Dollars (millions)
<u>Project Acquisition Costs</u>	
Asset Purchase Agreement	\$ 10.0
Engineering, Procurement and Construction Agreement	207.5
Total Project Acquisition Costs	<u>\$ 217.5</u>
<u>Owner's Costs</u>	
Legal Fees	\$ 3.4
Internal Labor and expenses	
- Project Management	
- Environmental	
- Real Estate	
- Engineering	4.2
- Information Technology	
- Finance	
- Operations	
- Regulatory	
- Planning	
Concurring Engineer's Costs (External)	1.1
Total Owner's Costs	<u>\$ 8.7</u>
Total Project Costs	<u><u>\$ 226.2</u></u>

STATE OF MICHIGAN

BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter of the application of
**UPPER MICHIGAN ENERGY RESOURCES
CORPORATION** for approval of its integrated
resource plan pursuant to MCL 460.6t
and for other relief.

Case No. U-21081

PROOF OF SERVICE

STATE OF MICHIGAN)
) ss
COUNTY OF INGHAM)

Kacey O'Neill , being first duly sworn, deposes and says that on December 1, 2023, she served Upper Michigan Energy Resource Corporation's Application requesting approval of the Purchase and Sale Agreement between UMERC and Renegade Solar Energy, LLC and the Engineering, Procurement and Construction Agreement. Also enclosed is the Affidavit of Richard F. Stasik and supporting Attachments 1-4 via e-mail:

Heather M.S. Durian	<u>durianh@michigan.gov</u>
Monica M. Stephens	<u>stephensml@michigan.gov</u>
Nicholas Q. Taylor	<u>taylorm10@michigan.gov</u>
John R. Liskey	<u>john@liskeypllc.com</u>
Timothy J. Lundgren	<u>tundgren@potomaclaw.com</u>
Michael E. Moody	<u>moodym2@michigan.gov</u>
Laura A. Chappelle	<u>lhappelle@potomaclaw.com</u>

Kacey O' Neill

Subscribed and sworn before me
on this 1st day of December, 2023.

Ronda L. Harris, Notary Public
State of Michigan, County of Oakland
My Commission Expires: 11/4/2025
Acting in the County of Ingham