Witness OCS-2S

BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

In the Matter of the Voluntary Request Of Rocky Mountain Power for Approval Of Resource Decision to Repower Wind Facilities	**)** **)** **)** **)**	**Docket No. 17-035-39**

CONFIDENTIAL SURREBUTTAL TESTIMONY OF

PHILIP HAYET

FOR THE

OFFICE OF CONSUMER SERVICES

NOVEMBER 15, 2017

REDACTED

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I. INTRODUCTION

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, TITLE AND COMPANY.

A. My name is Philip Hayet. My business address is 570 Colonial Park Drive, Suite 305, Roswell, Georgia, 30075. I am Vice President of J. Kennedy and Associates, Inc. ("Kennedy and Associates").

Q. PLEASE STATE WHOSE BEHALF YOU ARE TESTIFYING.

A. I am appearing on behalf of the Office of Consumer Services ("Office").

Q. DID YOU PREVIOUSLY FILE TESTIMONY IN THIS DOCKET?

A. Yes, I filed direct testimony on September 20, 2017 on behalf of the Office.

Q. WHAT IS THE PURPOSE OF YOUR SURREBUTTAL TESTIMONY?

A. I respond to the rebuttal testimony of Company witnesses Ms. Cindy Crane, Mr. Rick Link and Mr. Timothy Hemstreet regarding the economic evaluations that the Company performed.

Q. WHAT APPEARS TO BE THE OVERALL THEME OF THE COMPANY'S REBUTTAL TESTIMONY?

A. Ms. Crane appears to provide the Company's overall theme in her summary in which she states that the benefits of repowering "are now greater and more certain, and the risks have decreased." This assertion stems from the fact that the Company recently (October 2017) finalized contracts with both turbine suppliers, General Electric ("GE") and Vestas, which the Company claims to have accomplished based on even more favorable terms for the project. The Company also appears to believe that it can "manage risks that could cause

customer costs to increase based on "off-ramps built into the project or by seeking additional direction from the Commission before or during project implementation."[1]

Q. DO YOU AGREE WITH THIS?

A. No, I do not. According to the facts that the Company presented in its rebuttal testimony, it appears the repowered projects could produce greater benefits than initially projected under certain conditions, but there is no guarantee that those conditions will occur, and in fact, it appears that less favorable conditions are more likely to occur. Specifically, I believe that it is quite possible that Congress will pass changes to the tax code that could have a big impact on the repowering projects, and when that impact is coupled with the fact that a low to medium gas/low CO_2 future could occur, then there is a good chance that the repowering projects would be uneconomic.[2] I continue to conclude that the Company has not proven that repowering its wind resources "will most likely result in the acquisition, production, and delivery" of electricity to its customers at the lowest reasonable cost and least risk possible.[3] In addition, I continue to be concerned that the repowering project did not result from an IRP process that was fully vetted, in that PacifiCorp did not allow enough opportunity for stakeholders to collaborate on assumptions and analyses that should have been considered.

Q. WHAT ARE YOUR RECOMMENDATIONS?

A. I continue to recommend that the Commission deny the Company's repowering request. As I stated in my direct testimony, I believe the Company could allow additional time to collaborate further with stakeholders and to conduct additional analyses, and then refile a

[1] Cindy Crane rebuttal testimony at line 18.
[2] Office witness Donna Ramas addresses the potential tax code changes in greater detail in her rebuttal testimony.
[3] Utah Code § 54-17-402.

revised application if it still believes the repowering options are economic. However, if the Commission were to approve the Repowering project, I believe it should do so by imposing a set of conditions that would likely mitigate the overall risks to ratepayers, which I explain below.

II. ECONOMIC EVALUATION

Q. WHAT HAPPENED RECENTLY THAT LED THE COMPANY TO CLAIM THAT THE BENEFITS OF REPOWERING ARE NOW GREATER AND MORE CERTAIN THAN WHEN IT FILED ITS DIRECT TESTIMONY?

A. In his direct testimony, Mr. Hemstreet mentioned that turbine manufacturers were continuing to work to improve efficiencies of wind energy, and he stated that General Electric ("GE") was developing a 91 meter rotor for repowering projects.[4] Mr. Link's rebuttal testimony notes that the Company received verification on October 6, 2017 that the more efficient [redacted] turbine could be used for PacifiCorp's repowering project.[5] This wind turbine has an increased rotor diameter and is capable of producing more energy at a higher nameplate capacity rating compared to the [redacted] wind turbine that the Company was planning to use when it filed direct testimony in June 2017.

Q. DO YOU BELIEVE THAT THE COMPANY HAS INCREASED THE BENEFITS OF REPOWERING SINCE FILING DIRECT TESTIMONY?

[4] Hemstreet Direct Testimony, at line 289.

[5] While the Company did not know that it would be able to use the [redacted] turbine, it still must have known that it would be able to install larger turbines, because all of its rebuttal analyses, with the exception of one sensitivity, were conducted assuming it would install the [redacted] turbine. One sensitivity analysis was performed to demonstrate the additional benefits that would be achieved by using the [redacted] turbines (Link Rebuttal Table 8).

A. No. It is true that the amount of energy that could be produced by the new turbines is potentially greater than what would have been produced using the prior turbines. In its direct testimony, the Company expected that shortly after repowering, it would produce 551 GWh more energy on an annual basis compared to what its existing turbines would have produced. In its rebuttal testimony, the Company is now expecting that using the new turbines, shortly after repowering, it would produce 743 GWh more energy on an annual basis compared to what its existing turbines would have produced. However, there are still certain critical risks that could cause the repowering project to be uneconomic regardless of which turbine is used.

Q. WHAT CRITICAL RISKS COULD RESULT IN THE REPOWERING BEING UNECONOMIC?

A. As Office witness Donna Ramas and I both discussed in our direct testimonies, the Company has not properly accounted for the risk of changes that might be made to the federal tax code that could greatly affect the repowering project. While Ms. Crane states that "the Company has actively managed and mitigated all areas of potential PTC risk raised by the parties,"[6] I do not believe that is the case. In direct testimony, Ms. Ramas and I explained that Congress was considering making changes to the tax code, and that consideration was being given to lowering the corporate tax rate to 15% or 20%.[7] A reduction in the corporate tax rate to between 15 and 20% could significantly lower the potential benefit of repowering the Company's wind turbine units.

Although we requested the Company to consider performing analyses using these potential corporate tax rates (15% and 20%), the Company did not perform the requested

[6] Cindy Crane rebuttal testimony at line 46.
[7] Donna Ramas direct testimony at line 595.

analyses. However, in its rebuttal testimony, the Company did conduct a sensitivity analysis in which it analyzed a reduction in the tax code from 35% to 25%. Mr. Link presented the results of this sensitivity in Table 7 of his rebuttal testimony.

Q. WHAT WERE THE RESULTS OF MR. LINK'S TAX POLICY SENSITIVITY?

A. Mr. Link conducted a sensitivity using the Company's PaR to 2036 model based on the medium natural gas, medium CO2 case. The Company determined that the impact of lowering the corporate tax rate assumption from 35% to 25%, using its updated modeling assumptions (using the [redacted]), was a reduction in the repowering benefit of $93 million. Had the Company considered lowering its tax rate assumption to 15% or 20%, the reduction in the repowering benefit would have been even greater. It should also be noted that since the Company only evaluated the tax policy sensitivity case using the medium gas, medium CO2 assumptions, it is not clear what the impacts of the Company's tax sensitivity case would have been had other fuel and CO2 forecasts been considered.

Q. HAVE THERE BEEN ANY FURTHER DEVELOPMENTS SINCE THE COMPANY FILED ITS DIRECT TESTIMONY?

A. Yes, as Ms. Ramas discusses in her rebuttal testimony, the House Ways and Means Committee ("House") issued the Tax Cuts and Jobs Act on November 2, 2017, which proposes a reduction in the corporate tax rate to 20%. In addition, it appears that two other changes are being proposed that could affect the repowering project. First, the proposal appears to eliminate the inflation adjustment that currently increases the production tax credit ("PTC") on an annual basis. Initially, the PTC rate was set to $1.5 cents per kWh, and increased based on the rate of inflation. Based on the inflation adjustment, PTCs are currently worth 2.4 cents per KWh in 2017. However, if the House proposal is enacted,

PTCs will be worth just 1.5 cents per kWh throughout the 10 years period that PTCs are available for wind projects.

Q. PLEASE EXPLAIN THE SECOND PROPOSED CHANGE?

A. Second, in order to be eligible to receive 100% of the PTC credit, wind projects must have started construction prior to the end of 2016, and must be completed no more than four years after construction begins. A safe harbor provision exists that allows a project to prove that construction began prior to the end of 2016 if 5% of the total project cost was spent prior to the end of 2016. Furthermore, to be eligible for full PTC credit, the project must be completed by no later than December 31, 2020. PacifiCorp was planning to make use of this safe harbor provision, however, under the House proposal, this safe harbor provision is being eliminated. If it is eliminated, construction on PacifiCorp's repowering projects would be assumed to start in 2018. Based on that construction start date, the projects would be eligible for just 60% of the full PTC value.

Q. IS IT CLEAR THAT THESE CHANGES WILL BE IMPLEMENTED?

A. At this time, there is a great deal of uncertainty about what will ultimately happen. Congress seems resolute in wanting to pass some tax reform legislation, however, there is no certainty what the final bill will contain. It is certainly possible that these tax changes could be enacted, but no one knows for sure. As far as timing, some people think that tax legislation could pass in 2018, but again, there is no guarantee of that, and it is conceivable that tax code changes might not pass until later in 2018 or even in 2019, after the mid-term elections. Depending on what passes, this legislation could have a significant impact on the economics of the Company's repowering project.

Q. DID YOU EVALUATE THE IMPACT OF THESE PROPOSED TAX CODE CHANGES ON THE COMPANY'S ANALYSIS OF ITS PROPOSED REPOWERING PROJECTS?

A. Yes. The following table provides a comparison of the Company's Stochastic PaR results to 2036 (Case A) under its base case assumptions in which the underlying federal corporate tax rate is assumed to be 35%, and compares it to a series of sensitivity cases. Case B is the Company's 25% corporate tax rate sensitivity case. Case C is a sensitivity that assumes the corporate tax rate is reduced to 20%, and Case D reflects the House's proposed tax code changes. In other words, Case D includes a 20% corporate tax rate assumption, removes the PTC inflation adjustment, and assumes the construction continuity safe harbor provision is eliminated, which would reduce the PTC value to 60% of the full amount available. Negative results in the table indicate that the repowering case is beneficial.

Table 1[8]
Comparison of Tax Sensitivity Cases
PaR to 2036 Analyses
(Millions of Dollars)

	A	B	C	D
Price-Policy Scenario (2036 Study)	**Company 35%**	**Company 25%**	**OCS 20%**	**OCS 20% (No Infl, 60% PTC)**
Low Gas, Zero CO_2	(90)	3	38	395
Low Gas, Medium CO_2	(108)	(15)	21	377
Low Gas, High CO_2	(114)	(21)	15	371
Medium Gas, Zero CO_2	(116)	(23)	13	369
Medium Gas, Medium CO_2	(115)	(23)	13	369
Medium Gas, High CO_2	(131)	(38)	(2)	354
High Gas, Zero CO_2	(152)	(59)	(23)	333
High Gas, Medium CO_2	(167)	(74)	(38)	318
High Gas, High CO_2	(167)	(74)	(39)	318
Impact from 35% Case		93	128	485

Case B's results (25% corporate tax rate case) indicate that the net benefit for each natural gas/CO2 case is approximately $93 million lower when the corporate tax rate is set to 25% compared to 35%. Case C's results (20% corporate tax rate case) indicate that the net benefit drops further, and is $128 million less than the Company's 35% corporate tax rate case. Finally, Case D's results (House proposed tax code case) indicate that the net benefit drops even further, and is $485 million less than the Company's 35% corporate tax rate case. These results indicate that six out of nine of the natural gas/CO2 cases are either uneconomic or marginally economic in the 20% corporate tax rate case (Case C), and all of the cases are uneconomic in the House sensitivity case (Case D).

[8] Since the Office did not have access to the Company's SO or PaR production cost models, the Office used the Company's results to estimate its results. It is likely that these results would be somewhat different had production cost modeling been performed, though the differences would not likely be significant. If desired, the Company could run these cases using its production cost models.

Q. DID YOU CONDUCT A SIMILAR ANALYSIS USING THE COMPANY'S PAR TO 2050 RESULTS?

A. Yes, but as I discussed in my direct testimony, I have concerns about the way in which the Company extended its production cost results from 2036 to 2050 without performing either an optimal expansion plan analysis or by utilizing a production cost model. Nevertheless, for the sake of completeness, I developed results through 2050 based on the Company's modeling methodology. The results are provided in Table 2 below.

Table 2[9]
Comparison of Tax Sensitivity Cases
PaR to 2050 Analyses
(Millions of Dollars)

	A	B	C	D
Price-Policy Scenario (2050 Study)	**Company 35%**	**Company 25%**	**OCS 20%**	**OCS 20% (No Infl, 60% PTC)**
Low Gas, Zero CO_2	(360)	(219)	(157)	322
Low Gas, Medium CO_2	(480)	(338)	(277)	203
Low Gas, High CO_2	(473)	(331)	(270)	210
Medium Gas, Zero CO_2	(483)	(341)	(280)	200
Medium Gas, Medium CO_2	(471)	(330)	(268)	211
Medium Gas, High CO_2	(534)	(392)	(331)	149
High Gas, Zero CO_2	(555)	(414)	(352)	127
High Gas, Medium CO_2	(635)	(494)	(432)	47
High Gas, High CO_2	(619)	(477)	(416)	64
Impact from 35% Case		142	203	683

While the results in this table indicate that the benefits of repowering are higher in the PaR to 2050 analyses, the results of all of the natural gas/CO2 cases in Sensitivity D (House proposed tax code case) are uneconomic.

[9] See footnote 8.

Q. WHAT ARE THE MAIN DRIVERS OF THE RESULTS IN THE SENSITIVITY CASES ABOVE?

A. PTC benefits are the main driver for the economics of the project. The following table contains the PTC value that was used as an input assumption for each sensitivity case, and includes the computed present value PTC benefit that was used in the analysis.

Table 3
Comparison of PTC Value Under Tax Sensitivity Cases

	A	B	C	D
	Company 35%	**Company 25%**	**OCS 20%**	**OCS 20% (No Infl, 60% PTC)**
PTC (2017 $/MWh)	$24.00	$24.00	$24.00	$9.00
Grossed Up PTC value (2017 $/MWh)	$38.68	$33.52	$31.43	$11.79
NPV of Repower PTC ($million)	$902	$767	$713	$233

The first row of data contains the base PTC assumption used in the sensitivity case. In cases A, B and C, the PTC value was assumed to be $24/MWh in 2017. In Case D, the inflation assumption was removed, and the PTC value ($15/MWH) was then reduced by assuming that only 60% of the PTC value was available. The second row is the calculated PTC benefit on a dollar per MWh basis, after grossing up the PTC value for taxes. This is the actual benefit of the PTCs to customers. The third row is the incremental increase in the PTC benefit comparing the updated repowered wind case to the existing wind case on a net present value basis. This indicates that the PTC benefits could drop significantly depending on the tax assumptions, and indicates that the tax reform changes are a significant risk for the repowering project.

Q. MR. HEMSTREET ARGUES THAT IT WOULD NOT BE REASONABLE TO CONDUCT ADDITIONAL ANALYSIS OF THE PROJECT OVER THE NEXT FOUR TO SIX MONTHS (HEMSTREET REBUTTAL, BEGINNING AT LINE 622) AS YOU HAVE PROPOSED. DO YOU AGREE WITH MR. HEMSTREET?

A. No. I simply do not believe that the Company has provided the Commission with a plan that would lead to the Company having a least cost, least risk resource plan. Furthermore, Mr. Hemstreet argues that a delay in the project would be unreasonable because it could potentially increase project costs, even though it could be completed before the PTC deadline expires. Mr. Hemstreet never states that a delay would definitively increase project costs, or how much the delay would cost. Furthermore, the Company did not conduct any economic evaluations of the potentially higher project cost if a delay were to occur. All in all, Mr. Hemstreet's argument that it would not be reasonable to introduce a short delay is simply unsupported.

Q. MR. LINK CLAIMS THAT YOU HAVE NOT CALCULATED THE ECONOMICS OF EACH INDIVIDUAL PROJECT CORRECTLY (LINK REBUTTAL, LINE 503), AND YOU PERFORMED PART OF THE ANALYSIS INAPPROPRIATELY (LINK REBUTTAL, LINE 509). DO YOU THINK THESE ARE REASONABLE ASSERTIONS?

A. Technically, there is nothing inaccurate about what Mr. Link said, though I think it is disingenuous to make these assertions without noting that I was up-front about the fact that I did not have access to use the Company's SO or PaR models (Hayet Direct, line 391), and I admitted that the results would likely be different if production cost modeling was performed. (Hayet Direct, line 393). Furthermore, I noted that the Company was asked,

but refused to perform this analysis in a discovery request (Hayet Direct, line 395). Finally, I concluded by recommending that the Company conduct a proper analysis (Hayet Direct, line 445), which it appears it has now done based on the Company's updated rebuttal case assumptions.

Q. WHAT RESULTS DID MR. LINK PRESENT IN EVALUATING THE ECONOMICS OF INDIVIDUAL PROJECTS?

A. Mr. Link presented two sets of results. In Table 4, he summarized his results on a unit by unit basis using both the SO and PaR models through 2036. In Table 5, he summarized his economic evaluation on a unit by unit basis using a combination of SO and PaR results through 2050. But, once again, Mr. Link did not consider the impact of tax law changes or the impact if low natural gas/low CO2 costs were to prevail. He simply assumed that the federal corporate tax rate would be 35%, and he only analyzed the medium gas, medium CO2 scenario. From this, he concluded that repowering all 12 projects "will maximize customer benefits." (Link Rebuttal, line 633)

Q. DO YOU AGREE WITH MR. LINK'S CONCLUSION?

A. No. Since, it is highly likely that the corporate tax rate will change, and other tax code changes could be made, it is quite possible not all projects would be economic. I analyzed the benefits of repowering the individual projects using the Company's PaR to 2036 Medium Gas, Medium CO2 updated case. For this analysis, I evaluated the same tax sensitivity cases that I analyzed in Tables 1 and 2 above. I then sorted the results in order of the net benefits in the 20% corporate tax rate case. Negative results in the table indicate that the repowering case is beneficial.

Table 4[10]
Comparison of Individual Project Net Benefits
PaR to 2036 Analyses
(Millions of Dollars)

	A	B	C	D
Price-Policy Scenario – Med Gas, Med CO2 (2036 Study)	**Company 35%**	**Company 25%**	**OCS 20%**	**OCS 20% (No Infl, 60% PTC)**
Goodnoe Hills	(21)	(12)	(9)	21
Marengo 1	(26)	(12)	(7)	45
Seven Mile Hill 1	(20)	(9)	(4)	39
Seven Mile Hill 2	(5)	(3)	(2)	7
Glenrock 1	(14)	(5)	(1)	34
Marengo 2	(9)	(3)	(0)	24
Glenrock 3	(3)	(1)	1	12
McFadden Ridge	(0)	3	4	15
Dunlap Ranch	(11)	0	5	50
Rolling Hills	(3)	3	6	30
Leaning Juniper	(3)	5	9	41
High Plains	(1)	9	12	50
Total Benefit	(117)	(24)	13	369

Depending on the tax sensitivity case, the results indicate that only some of the projects would be economic to repower. For example, in the 20% tax sensitivity case (Case C), only six of the projects would be economic to repower, and some of the six would be marginally economic. None of the projects in Case D would be economic to repower. For the sake of completeness, I also performed the same analysis using the PaR results to 2050, which are included in Table 5 below.

[10] See footnote 8.

Table 5[11]
Comparison of Individual Project Net Benefits
PaR to 2050 Analyses
(Millions of Dollars)

	A	B	C	D
Price-Policy Scenario – Med Gas, Med CO2 (2050 Study)	**Company 35%**	**Company 25%**	**OCS 20%**	**OCS 20% (No Infl, 60% PTC)**
Goodnoe Hills	(50)	(37)	(32)	8
Marengo 1	(77)	(55)	(46)	22
Seven Mile Hill 1	(65)	(49)	(42)	16
Seven Mile Hill 2	(17)	(13)	(12)	1
Glenrock 1	(50)	(36)	(30)	17
Marengo 2	(30)	(19)	(15)	17
Glenrock 3	(15)	(10)	(8)	7
McFadden Ridge	(11)	(6)	(4)	11
Dunlap Ranch	(60)	(41)	(34)	29
Rolling Hills	(30)	(19)	(15)	19
Leaning Juniper	(34)	(20)	(15)	28
High Plains	(37)	(22)	(15)	36
Total Benefit	(477)	(329)	(268)	211

Q. WHAT DO THESE RESULTS INDICATE?

A. Setting aside for the moment my concern that the results to 2050 are overstated due to the Company's extension methodology, the results above indicate that even if there are greater benefits in the PaR to 2050 analysis, individual wind projects could be uneconomic depending on the ultimate tax code changes. In Case D (House proposed tax code case), all of the individual wind repowering projects are uneconomic, but it is likely that based on other assumed tax code changes, only some of the wind repowering projects would be uneconomic.

[11] See footnote 8.

Q. ARE THERE ANY PROJECTS THAT WOULD PROVIDE SUBSTANTIAL ECONOMIC BENEFITS IF NO TAX CODE CHANGES ARE IMPLEMENTED, BUT WOULD LIMIT THE HARM IN THE EVENT THAT ADDITIONAL TAX CODE CHANGES ARE IMPLEMENTED?

A. Yes, based on a review of the results in the Tables above, I determined that in the event the Company were to repower some, but not all of its proposed wind repowering projects, it could still achieve substantial benefits if the tax code remained the same, and it could avoid significant harm if additional tax code changes were implemented. By limiting repowering to the following projects, Goodnoe Hills, Marengo 1, Seven Mile Hill I, Seven Mile Hill II, Glenrock I, and Marengo 2, the Company could mitigate the harm if code changes were to occur, but would provide substantial benefits if no or less significant tax code changes were to occur. While the Company determined that the capital investment to repower all 12 of its wind turbine projects would be $1.083 billion, I determined from the Company's workpapers that the capital cost to repower just these six wind turbine projects would be [redacted] million.

There is no question that repowering would benefit the most if no tax code changes occur (Case A), which is unlikely. But if that were the case, the results of Case A indicate that if just these six wind power projects were repowered, the Company would expect to achieve a net present value benefit of $95 million in the "to 2036" analysis (Table 4), and $289 million in the "to 2050" analysis. This means that 81% (95/117) of the total expected net benefit could be achieved in the to 2036 analysis, and 61% (289/477) of the total expected net benefit could be achieved in the to 2050 analysis, based on about [redacted] the total

investment that otherwise would be spent if all 12 of the wind power projects were repowered.

If, on the other hand, the tax code changes are made in line with the House proposal (Case D), then the benefit of wind repowering would be eliminated entirely in both the to 2036 case and in the to 2050 case. If the Company goes forward with wind repowering, the harm would be mitigated if just the six identified wind projects were repowered. In that event, the harm would be $170 million and $81 million in the to 2036 and the to 2050 cases, respectively. Correspondingly, this amounts to just 46% (170/369) and 38% (81/211) of the total harm in the to 2036 and the to 250 cases, respectively, that could occur if all twelve projects were repowered under the assumed House proposed tax assumptions.

Q. DO YOU HAVE ANY ADDITIONAL COMMENTS REGARDING THE REPOWERING ANALYSES THAT THE COMPANY HAS PERFORMED?

A. Yes, I noted in my direct testimony, stakeholders had a limited opportunity in the 2017 IRP to provide feedback on the Company's proposed resource plans, including the repowering projects. Even in this docket, the Company has not thoroughly evaluated all critical assumptions that could impact the benefits of the wind repowering units. Although Congress and the Trump administration have been discussing potential tax code changes since 2016,[12] the Company did not conduct any analysis of tax impacts until it filed rebuttal testimony in this docket, and even in rebuttal, the analysis it performed was limited in scope to a single 25% corporate tax rate case. In addition to not conducting a range of tax sensitivity cases, the one tax policy sensitivity it did conduct was limited to considering just the medium natural gas, medium CO2 case. On several occasions, when asked in

[12] See Donna Ramas Direct Testimony at line 589.

discovery for analyses that it may have performed or could perform, the Company simply stated that it did not perform the analyses.[13] I believe the Commission would have been presented with a more complete picture if the Company had considered additional tax sensitivity cases, with different natural gas and CO2 assumptions. Furthermore, it would have also been helpful had the Company examined individual projects in more detail, and with different natural gas and CO2 assumptions.

III. CONCLUSION

Q. PLEASE SUMMARIZE YOUR CONCLUSIONS AND RECOMMENDATIONS.

A. As I have discussed, despite the Company's desire to move forward with these projects, it is quite possible that Congress will pass changes to the tax code that could have a negative impact on the project economics, and when that is coupled with the fact that a low gas/low CO_2 future could occur, there is a good chance that the repowering projects would be uneconomic. The Company has not proven that repowering its wind resources "will most likely result in the acquisition, production, and delivery" of electricity to its customers at the lowest reasonable cost and least risk possible. Therefore, I recommend that the Commission deny the Company's request at this time. If the Company would like, it could take additional time to collaborate further with stakeholders and to conduct additional analyses, and then refile a revised application if it still believes the repowering options are economic.

[13] See, for example, the Company's responses to OCS 9.3, 9.5 and 9.6 (OCS Exhibit 2.1S).

Q. IF THE COMMISSION IS INCLINED TO PERMIT THE COMPANY TO PROCEED WITH REPOWERING ITS WIND PROJECTS, DO YOU HAVE ANY ADDITIONAL RECOMMENDATIONS?

A. In the event the Commission decides to allow the Company to proceed with repowering its wind power projects, I recommend that the Commission only do so based on imposing a set of conditions that the Office proposes. I present one recommendation in my testimony and Office witnesses Ramas and Mangelson present other conditions in their testimony.

Q. WHAT CONDITION DO YOU RECOMMEND?

A. Based on the analysis that I performed and discussed earlier in my testimony, I recommend that if the Commission permits the Company to repower wind projects, it should mitigate the downside risks, while also capturing the majority of the potential upside benefits by limiting approval to just repower a set of six projects. As I discussed above, the six projects are Goodnoe Hills, Marengo 1, Seven Mile Hill 1, Seven Mile Hill 2, Glenrock 1, and Marengo 2.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.