IN THE MATTER OF PUBLIC UTILITY COMMISSION OF OREGON STAFF'S INVESTIGATION RELATING TO ELECTRIC UTILITY PURCHASES FROM QUALIFYING FACILITIES	))))))	CASE NO. UM 1129

TESTIMONY AND RESPONSE TO COMPLIANCE FILING

PHASE 1

Paul Woodin

on behalf of

Sherman County Court and
the J.R. Simplot Company

December 9, 2005

Q, **PLEASE STATE YOUR NAME AND OCCUPATION.**

A. My name is Paul Woodin and I am employed by Sherman County as a consultant on community renewable energy. A copy of my bio is attached as Sherman/Simplot Exhibit No. 103.

Q. **WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

A. I will address a portion of the proposed avoided costs and also the compliance issues raised in the three utility's filings as they relate to contracts terms and conditions. Dr. Reading will address issues related to natural gas price forecasts and the appropriate avoided cost rates.

Q. **HOW IS YOUR TESTIMONY ORGANIZED?**

A. I will address two major topics and then sequentially address most issues as they appear on the issues list prepared by staff and approved by the Judge in this matter. Failure to address an issue on that list should not be read to be either an endorsement or rejection of that issue.

Q. **DO YOU HAVE ANY PRELIMINARY CONCERNS YOU WOULD LIKE TO BRING TO THE COMMISSION'S ATTENTION**?

A. Yes.

Q. **PLEASE PROCEED.**

A. It is simply not possible to have a successful PURPA program unless all the various pieces of the puzzle fit. We must not only have attractive rates, but we must have contract terms that enable financing and are attractive to investors. The term of the agreement must be long enough to amortize the costs of development.

Q. IN YOUR OPINION, HAVE THE FILINGS MADE BY THE THREE UTILITIES FULLY COMPLIED WITH THE LETTER AND THE SPIRIT OF COMMISSION ORDER No. 05-584?

A. No. As things now stand, I do not believe Oregon will be able to enjoy a healthy QF industry.

Q. WHY DO YOU BELIEVE THAT A HEALTHY QF INDUSTRY IS NOT YET POSSIBLE?

A. Community Renewable Energy Projects have made dramatic improvements in the last year. Projects up to 10 MW with contract terms of 15-20 years are a major improvement over past years. As has been said earlier, for a QF industry to exist, all components of a fair power market must exist. I believe that there are still two major areas of deficiency that jeopardize this vision

Q. WHAT AREAS DO YOU BELIEVE ARE STILL DEFICIENT

A. I am concerned with both the proposed avoided cost rates and a number of terms in the proposed standard contracts. I will speak to avoided costs first and then discuss contract issues.

Q. WHAT IS YOUR CONCERN WITH THE PROPOSED AVOIDED COST RATES?

A. The utilities' proposed avoided cost rates as presented by both PGE and PacifiCorp produce avoided cost rates that depreciate by almost 25% over the next 5 years. These proposed avoided costs are significantly less than similar costs that the utilities will realize when they put their own projects in rate base. If these avoided costs become finalized, the impact on Oregon Community Renewables will be very serious. Recent price increases in wind turbines, steel components, and construction costs have resulted in increases of 40-60% compared to similar quotes obtained at the beginning of UM 1129. Combine these inflationary costs to construct a QF with the proposed declining avoided cost rates will make financing of these projects almost impossible. The first 10-15 years of a QF are particularly sensitive because those are the years when project debt must be paid off. A 25% rate decrease in these years is crippling to QF financing and could make them impossible to build.

Q. WHY DO YOU BELIEVE PGE AND PACIFICORP'S PROPOSED AVOIDED COST RATES SHOW SUCH A DRAMATIC REDUCTION IN PRICE IN THE FIRST 5 YEARS OF THE CONTRACTS

A. I believe the problem exists because of Oregon's definition of sufficiency. An excellent example can be seen with PacifiCorp's update to their IRP. Page 17 of this document, figure 2.3 shows West Coincident Peak Capacity. This chart shows several troubling concerns. The chart shows a declining capacity of existing reserves combined with a plan to acquire planned resources. What is troubling to QF's is that under the current sufficiency definition, utilities will always be acquiring planned resources of their own desire and will always remain sufficient when it comes to QF's. Each refiling of IRP's will continue this trend, and QF's will never receive fair avoided cost rates for their projects. They will always receive some discounted rate in the early years of their projects just when they need to be paying off project debt.

Q. WHAT DO YOU BELIEVE IS AN ACEPTABLE ALTERNATIVE?

A. We have always requested that the policies applied to community renewables be fair. This includes fair avoided cost rates and fair contract terms. I believe the problem with the proposed avoided cost rates is that they unintentionally impose a second class set of rates for QF's. Utilities are always in the mode of acquiring and building additional capacity to meet projected demand. That is good utility management. If Oregon's definition of sufficiency includes both existing capacity plus planned capacity, there will never be a need for QF's. There are several potential solutions to this dilemma. They are, in order of attractiveness to QF's, (1) eliminate the concept of sufficiency when IRP's show need for load growth, or (2) eliminate the definition of "planned resources" when establishing utility sufficiency and just consider existing resources.

Q. WOULD YOU PLEASE ELABORATE ON THESE OPTIONS

A. Both PacifiCorp's and PGE's IRP's show an increasing need for capacity. It is reasonable and fair to expect that community renewables should be able to share load growth. Scenario (1) recommends that the definition of sufficiency be changed such that when utilities are in a period of load growth, that QF's should receive full avoided costs for their projects... Only in periods of decreasing load demand should the utility be able to declare sufficiency. A slightly less favorable Scenario (2) recommends that the definition of sufficiency be changed to eliminate "planned resources" as a factor for establishing avoided cost rates. Using PacifiCorp's figure 2.3 as an example, if scenario (1) is used, there would be no sufficiency applied to QF's because the utility is in a period of load growth. If scenario (2) is used, there is only one year where existing capacity exists, so QF's would be eligible for full avoided cost rates starting in year 2. Under the current definition, even though the utility has increasing load demand, QF's are unfairly penalized by being barred for the first six years of their project from fair power rates.

Q. DOES THIS CONCLUDE YOUR COMMENTS ON AVOIDED COST RATES AND THE SUFFICIENCY PERIOD?

A. Yes

Q. YOU MENTIONED TWO AREAS THAT YOU FELT WERE DEFICIENT. WHAT IS THE SECOND AREA?

A. The second area of concern is the status of the utilities' standard contracts. In normal business interaction, contracts between two companies are mutually negotiated so that both sides reach fair and reasonable terms. Normally, the two businesses sit down and review a draft contract. In fairly short time, they reach a mutually agreeable set of terms. In the case of UM 1129, settlement conferences have not resulted in much willingness to compromise or find mutual positions. At this stage, a normal company would not agree to the terms presented by the utilities' standard contracts. Unfortunately, the only recourse the QF's have left is to try to explain, item by item which clauses they find troublesome and rely on the wisdom of the PUC commissioners to strike fair terms.

Q. WHICH ISSUES IN THE STANDARD CONTRACTS CONTAINED IN THE COMPLIANCE FILINGS CAUSE CONCERNS TO THE QF's?

A. The issues are presented in Staff's Consolidated Issues list. The remainder of my comments address these issues as numbered in the issues list.

Q. DO YOU HAVE ANY COMMENTS ON ISSUE NO. 1?

A. Yes. We believe the answer to Issue No. 1 is No. The compliance filings are not consistent with Order No. 05-584, as I noted earlier and as more fully explained below.

Q. DO YOU HAVE ANY COMMENTS ON ISSUE NO. 3?

A. Yes. We do not believe the standard contract terms contained in the compliance filings are reasonable as more fully detailed below.

Q. DO YOU HAVE ANY COMMENTS RELATIVE TO ISSUE NO. 4?

A. Yes; although we did not raise this issue in our initial issues list, we believe it is appropriate to have a clear understanding when multiple projects should in reality be considered a single project.

Q. DO YOU HAVE ANY RECOMMENDATIONS AS TO HOW THE COMMISSION WOULD DO THAT?

A. Yes. A number of parties contributed input to Department of Energy. Their testimony will present a proposal to define a QF's eligibility for a standard contract and which QF's need to apply for a non-standard contract. Sherman County has the opportunity to participate in these discussions and support ODOE's proposed definition.

Q. CAN YOU COMMENT ON ISSUE NO. 5(a)(i)?

A. Yes. This is an issue initially raised by Sherman/Simplot. Section 4.1.6 of Idaho Power's contract states that the security representations in Order No. 05-584 are the "minimum" security requirements. However, the Commission's Order does not appear to allow for additional security requirements at the discretion of the utilities.

Q. WHAT DO YOU MEAN BY THE PHRASE "AT THE DISCRETION OF THE UTILITIES"?

A. I understand "at a minimum" to mean additional security measures may be required by Idaho Power. That possibility is too vague and causes me concern that the utility may try to impose more burdensome security requirements.

Q. WHAT IS THE NEXT ISSUE RAISED ON THE LIST?

A. The next issue addressed is Issue No. 5 (a)(iv), PacifiCorp's inclusion of a definition of "default security". We do not believe this is necessary in light of the language in Order No. 05-584 which provides, at page 45:

> "in the event a QF defaults and the market prices to replace the contracted for energy exceed the contract price, future payments after the default period ends shall be commensurately reduced over a period of time to recoup costs incurred by the utilities".

The Commission's Order does not provide for default security.

Q. WHAT SECURITY PROVISIONS ARE APPROPRIATE?

A. We believe that insurance, engineer certification on construction and O & M plans are sufficient. After all, the QF who does not perform simply doesn't get paid.

Q. PLEASE ADDRESS THE NEXT ISSUE.

A. The next issue that we raised is found at Issue No. 5 (a) (v) on the issue list. Here we pointed out that the definition of a letter of credit in PacifiCorp's contract is inappropriate as it goes beyond the security requirement in Order No. 05-584 at page 45, which only requires certain representations be made by the QF. As long as a QF can make those basic representations, no additional security provisions are necessary.

Q. DO YOU HAVE ANY COMMENTS ON ISSUE NO. 5 (b) (iii)?

A. Yes. Weather-related events that reduce renewable energy deliveries should not trigger default provisions in QF contracts. After all, weather-related events that reduce renewable (hydro) production in the utilities' own plants do not relieve ratepayers from the obligation to continue to pay for such plant.

Q. DO YOU HAVE ANY COMMENTS ON ISSUE NO. 5 (b) (iv)?

A. Yes. It may be helpful to require QFs to estimate monthly minimum generating output for planning purposes – but; it is unfairly punitive to penalize QF's for failure to generate forecasts due to variations in weather patterns. If weathermen were held financially liable for long term weather predictions, the Weather Channel would be bankrupt. It is no more reasonable to hold QF's to accuracy of long term weather forecasting that the QF has no control over. It is more realistic is to use meteorologist's statistical long term forecasts based on historical estimates. These are the forecasts that financial bankers review to evaluate the ability of QF's to repay debt.

Q. PLEASE EXPLAIN.

A. The three IOUs should be interested in reasonable projections of production, but for QFs that are renewable, such production is outside of the control of the QF – as long as the QF's facility is available to produce when the motive force is in place.

Q. CAN YOU COMMENT ON ISSUE NO. 5 (b) (v)?

A. Yes. It should not be an event of default for a QF to fail to deliver due to weather. It is simply not reasonable and discriminates against QFs. Utilities still recover the costs of their hydro systems during periods of low water and have allowed no such punitive clauses into their contracts... Utilities will face the same issue as they build their own wind projects. They will not allow the same weather penalties be placed on their wind farms that they are demanding for QF's.

Q. DO YOU HAVE ANY COMMENTS ON ISSUE NO. 5 (b) (vi)?

A. Yes. We believe Idaho Power's approach to a QF meeting the commercial operation date is the only reasonable method offered by the three utilities. Idaho Power does not make it an event of default if the QF is making diligent efforts to achieve its commercial operation date.

Q. WHAT IS SHERMAN/SIMPLOT'S POSITION ON ISSUE 5 (b) (ix)?

A. It is not reasonable for the utility to impose damages for under-deliveries during periods of resource sufficiency. It is only common sense that if a utility is in resource sufficiency the failure of a QF to deliver does not impose a burden for the utility to acquire replacement power. Once again, this requirement is not a financial issue, just another attempt to punish the QF.

Q. WHAT ARE YOUR COMMENTS ON ISSUE NO. 5 (b) (xi)?

A. There are several different questions in Issue No. 5 (b) (xi). As noted above, we believe it is reasonable to permit QFs an opportunity to cure a default as provided for by Idaho Power. It seems that allowing a "commercially reasonable time" to cure is, by definition, a reasonable contract term. The flip side of that analysis suggests that by <u>not</u> allowing a commercially reasonable time to cure would be, by definition, <u>unreasonable</u>.

Q. WHAT OTHER ISSUES ARE ADDRESSED IN ISSUE NO. 5 (b) (xi)?

A. Whether or not PacifiCorp's opportunity to cure provisions should apply to all events of default. PacifiCorp has not explained what interest it serves to restrict the opportunity to cure to just one or two events of default. We therefore believe it is reasonable to allow an opportunity to cure for every event of default.

Q. WHAT IS YOUR FINAL POINT ON ISSUE NO. 5 (b) (xii)?

A. PGE's contract offers absolutely no opportunity for curing a default event. That is unreasonably harsh and does not further the goal of PURPA by encouraging the development of QF power.

Q. WHAT ARE THE ISSUES IN NO. 5 (b) (xii)?

A. Both PacifiCorp and PGE have provisions in their contracts that restrict a QF, once terminated for default, from selling again from the same QF facility site. For example, if the QF defaulted and was terminated, a lender who forecloses and takes possession of the QFs site would be precluded from restarting the facility. Once again, this provision seems to be designed to discourage the development of PURPA resources and should be rejected by the Commission.

Q, WHAT IS YOUR RESPONSE TO ISSUE NO. 5 (c) (ii)?

A. It is unreasonable for Idaho Power to charge a shortfall energy charge while it is in a resource sufficiency period. This is because when it is surplus, it does not have to acquire replacement power and is not damaged.

Q. PLEASE COMMENT ON ISSUE NO. 5 (c) (iii)?

A. Idaho Power proposes to charge interest on what it calls "recoupment power costs". The Commission limited damages to recovery of under deliveries over time and it did not allow the assessment of interest on those under deliveries. Therefore this is an overreach on Idaho Power's part

Q. PLEASE COMMENT ON ISSUE NO. 5 (d) (i)?

A. I am surprised this is even an issue. The Commission explicitly stated what security provisions are required from QFs. For Idaho Power and PacifiCorp to unilaterally attempt to impose additional security requirements is unreasonable.

Q. HOW DO YOU RESPOND TO ISSUE NO. 5 (d) (ii)?

A. Once again we are surprised to find something so at odds with the clear language of the Commission's Order. The Order clearly states that credit representations are all that is necessary. PacifiCorp's insistence on more burdensome credit-worthy requirements is unreasonable.

Q. HOW DO YOU RESPOND TO ISSUE NO. 5 (d) (iii)?

A. We object to PGE's requirement that QFs warrant that they are current on financial obligations to others. PGE has no interest in a QF's business dealings that are unrelated to its relationship with PGE. Their request is unreasonable.

Q. PLEASE COMMENT ON ISSUES NO. 5 (d) (iv).

A. I don't think it is clear that the security measures only come into play if the QF is unable to make the creditworthiness representations. In particular, PacifiCorp's contract appears to be out of compliance on this issue.

Q. PLEASE COMMENT ON ISSUE NO. 5 (e).

A. This issue was initially raised by Sherman/Simplot. I am not a lawyer and cannot talk about the details of an indemnification clause, but I do recognize that this clause is not parallel in what it covers for each party.

Q. PLEASE EXPLAIN.

A. Section 12.1 of PacifiCorp's contract requires the seller to indemnify PacifiCorp "to and at the point of delivery". On the other hand, PacifiCorp only indemnifies the seller "after the point of delivery". Since the point of delivery is, as I understand, the point at which PacifiCorp takes title to the electricity, it should likewise be required to indemnify the seller at the point of delivery.

Q. DO YOU HAVE A POSITION ON ISSUE NO. 7?

A. Yes. We believe it is reasonable to have an engineer certify that the project can operate as projected. However, the requirement that the engineer be unaffiliated with the project is unnecessary. The engineer's errors and omissions insurance is on the line, regardless of whether or not he is affiliated with the project. Therefore the veracity of the certification will not be increased by such a requirement. A normal QF project will likely have power equipment manufacturer's PE's involved, and the interconnection will likely be designed by an electrical PE. If a utility requires yet another independent PE, that cost should be borne by the utility and not imposed on the QF.

Q. DO YOU HAVE A POSITION ON ISSUE NO. 8?

A. Yes. This is a complicated question and has many possible scenarios. Nameplate ratings are good indicators of QF capacity, but some level of common sense needs to be applied also. For example, there are several older hydro projects that have been improved above their nameplate ratings by correcting power factor. There are also cases where older equipment might be replaced by slightly larger nameplate units. Perhaps the best rule of thumb to be applied is this – is the resulting modification/energy improvement still less than the 10 MW standard contract. If the answer is yes, than the change should be considered. It the modification/energy improvement takes a previously 10 MW standard contract above the threshold level, it should be reviewed by the PUC. For example, if tweaking a machine give better efficiency and it is fractionally over 10 MW, that may be acceptable. On the other hand, if an older 8 MW hydro turbine is replaced by a 10.5 MW unit, that probably would trigger some modification to its existing QF contract.

Q. DO YOU HAVE ANY COMMENTS REGARDING INSURANCE REQUIREMENTS MENTIONED IN ISSUE NO. 9?

A. Yes. Order No. 05-584 only required that QFs carry “prudent amounts of general liability insurance”. It did not specify rating levels for the insurance companies. Therefore requirements that QFs only carry insurance from companies not rated lower than “A-“ or “A” are not reasonable. Using a standard that only requires the QFs to use insurance companies that are “typically and reasonable used” should be sufficient. In a recent settlement meeting, staff recommended that acceptable insurance companies be acceptable and registered in Oregon. That would be an acceptable standard.

Q. DO YOU HAVE ANY COMENTS ON ISSUE NO. 11, DEALING WITH FORCE MAJEURE?

A. Yes. Lack of water and lack of wind should be included as events of force majeure. A QF, like a utility, has no control over the weather. Therefore, drought of wind or water should be an event of force majeure.

Q. DO YOU HAVE ANY COMMENTS ON ISSUE NO. 12?

A. Yes. I understand that PURPA requires utilities to purchase QF power either directly or indirectly. This means that a QF may choose to wheel its power over an intervening system to the ultimate purchasing utility.

Q. HOW CAN A QF WHEEL ITS POWER?

A. It must purchase transmission services from the utility in whose territory it is located.

Q. WHAT SERVICES ARE INCLUDED IN SUCH A TRANSACTION?

A. The QF will purchase all services necessary for the host utility to physically move its power to a point of delivery on the purchasing utility’s system. This would include line losses, balancing reserves and load following services. In essence, it is up to the QF to get its power production to the purchasing utility's system.

Q. DOES THE PURCHASE OF LINE LOSSES AND BALANCING SERVICES FROM THE HOST UTILITY AFFECT THE PURCHASING UTILITY'S OBLIGATION TO PURCHASE ALL OF THE DELIVERED NET OUTPUT FROM THE QF?

A. No. I understand that the FERC has ruled that such purchases are not a sale of power for re-sale and hence such purchases do not affect the purchasing utility's obligation to purchase all of the delivered net output from the QF.

Q. WHAT IS INCLUDED IN DELIVERED NET OUTPUT?

A. A QF must purchase line losses as well as balancing services and schedule its deliveries on a "day-ahead" basis. Also, it is my understanding that everyone must schedule in whole one megawatt increments. That means a QF that expects to produce 5.5 MW over 24 hours will have to schedule deliveries of 6 MW for 12 hours and 5 MW for 12 hours in order to stay in balance.

Q. THEN DOES THAT MEAN THE PURCHSING UTILITY IS PAYING FOR 1/2 OF A MW FOR 12 HOURS THAT THE QF IS <u>NOT</u> PRODUCING?

A. Technically, it is. However, for the other 12 hours, the purchasing utility is <u>not</u> paying the QF for power for 1/2 a MW it is producing.

Q. CAN A QF GAME THE SYSTEM AND SELL CONSISTENLY MORE POWER THAN IT PRODUCES?

A. No. There are severe penalties for such intentional deviations that the host utility is required to impose on the QF under its Open Access Transmission Tariff.

Q. DO YOU HAVE ANY COMMENTS ON ISSUE 13?

A. Yes. The first part of this issue asks whether a QF may choose to serve some or all of its own load that is not plant parasitic in order to determine net output. The answer to that question is a definite yes. The utility should not care if the QF uses some of the output to serve its own load. The remaining output would be available for sale to the utility.

Q. WHAT IS THE OTHER QUESTION IN ISSUE NO. 13?

A. It appears that PacifiCorp at section 1.24 and PGE at section 1.14 of their compliance filings want to be able to deduct load in addition to station use in determining net output. We think this is outrageous, if it is intentional. Where do they intend to draw the line on deducting load other than station use? I thought that PURPA requires utilities to purchase all of the net output from QFs. Deducting load other than station use seems to obviate that obligation. It should not be allowed.

Q. DO YOU HAVE ANY COMMENTS ON OWNERSHIP OF ENVIRONMENTAL ATTRIBUTES IN ISSUE NO 21?

A. Yes. The PUC ruled in favor of QF’s on this issue in a separate docket. Sherman County supported staff’s recommendations that green tags remain the property of the QF’s and are pleased with the final ruling

Q. DO YOU HAVE ANY COMMENTS ON ISSUE NO. 22, RELATING TO METER ERRORS?

A. Yes. It seems to me that it is unreasonable for the QF to pay for any meter errors, since the utility owns, furnishes, designs, installs, inspects, tests, maintains and replaces all metering equipment. Under such circumstances, it is not reasonable to put the burden of metering error on the QF.

Q. DO YOU HAVE ANY COMMENTS ON ISSUE NO. 30?

A. Yes. PGE's contract prohibits any liens or encumbrances on the QF, other than for third party financing. Actually, this clause exists in several of the utilities contracts. This is unnecessarily restrictive and ties the hands of the QF without providing any protection for the utility. There may be situations where such liens may be appropriate. My experience in business is that liens and encumbrances can be placed on a financially stable company for a number of reasons that do not threaten the ability of the company to perform its commitments. Examples that I have seen include sub-contractors placing liens on everyone involved in construction work. In some cases, I have seen contractors apply liens as they start work to ensure payment. A check of the utilities will likely show a number of liens against them at any given time. These liens only become of concern if they cause a company to not be able to perform its obligatory contractual obligations.

Q. DO YOU HAVE ANY COMMENTS ON ISSUE NO. 31?

A. Yes. Our recommendation is a simple one that gives the QF some flexibility to do maintenance after hours when practicable. Sometimes it may be very expensive to do maintenance after hours, and it may not be necessary to do so. If the utilities' contract phrasing were to be followed explicitly, the only scheduled maintenance that a QF could perform would be after midnight or Sundays. Utilities do not place that restriction on their own operations.

Q. DO YOU HAVE ANY COMMENTS ON ISSUE NO. 32?

A. Yes. The PGE contract calls for a blanket release by the QF to PGE of all claims related to the facility whether known or unknown. This appears to overreach and I don't understand what the point is of such a broad release.

Q. DO YOU HAVE ANY COMMENTS ON ISSUE NO. 33?

A. Yes. Idaho Power's contract requires a hydro QF to warrant that it has a FERC license at the time it signs the power purchase agreement. This is too restrictive, as some developers may not want to spend the money to obtain a license until they have a power purchase agreement. It should be changed to require the QF to warrant that it will have FERC license prior to the operation date.

Q. DO YOU HAVE ANY COMMENTS ON ISSUE NO. 34?

A. Yes. Idaho Power attempts, at sections 13.2 through 13.4 of its contract, to require the QF to give rights of way for lines that are unrelated to the QFs project without compensation. We don't understand why the QF should be forced to donate rights of way as a condition to doing business unless those rights of way are necessary to actually facilitate purchasing the QF's power. In some cases, the QF site may be leased from land that the QF does not have rights to authorize rights-of-way. This is a totally unreasonable requirement by Idaho Power and gives them access to land that they did not previously have to build transmission not related to the QF.

Q. DOES THIS CONCLUDE YOUR TESTIMONY? A. Yes.

BEFORE THE

OREGON PUBLIC UTILITIES COMMISSION

IN THE MATTER OF PUBLIC UTILITY COMMISSION OF OREGON STAFF'S INVESTIGATION RELATING TO ELECTRIC UTILITY PURCHASES FROM QUALIFYING FACILITIES	))))))	CASE NO. UM 1129

TESTIMONY AND RESPONSE TO COMPLIANCE FILING

PHASE 1

Don C. Reading, Ph.D.

Ben Johnson Associates, Inc.

on behalf of

Sherman County Court and
the J.R. Simplot Company

December 8, 2005

Q. Are you the same Don Reading who filed direct testimony in the initial phase of Docket UM 1129?

A. Yes.

Q. Have you reviewed the filings of the utilities in this Docket?

A. Yes. Exhibit 100 shows the results of those filings for the three utilities based on a one MW QF with a 75% capacity factor that does not vary daily or seasonally for each of the three utilities. The payments to a QF with this load profile are depicted for each of the three methods outlined by the Oregon Commission. The values used to compute the payments are based on the compliance filings by each utility in this Docket. The most notable aspect is for both PacifiCorp and PGE, QF rates decline by one-third over the five years before increasing over the following 20 plus years. Idaho Power is following the procedures established in Idaho and does not have a surplus period. Therefore, their QF rates tend to be flat over the next few years then rise. The reason for this dramatic drop is two fold. Both utilities project a drop in gas prices. PacifiCorp projects gas prices to drop from $7.18 MMBtu in 2005 to $5.16 MMBtu in 2010. PGE's forecasted gas price in 2010 is $3.67 MMBtu.

The other reason for the drop in QF rates is the operation of the sufficiency period projected by the two utilities -- through 2010 for PacifiCorp and through 2009 for PGE. During these sufficiency periods market rates are used. These rates also decline. The rate drops for PGE from 6.08 cents per kWh in 2006 to 4.53 cents in 2010. PacifiCorp's QF fixed rates drop from 6.62 cents per kWh in 2005 to 5.63 cents in 2010.

Q. Given the current high price of natural gas, does it make sense that QF rates should drop by one-third over this same near term five year period?

A. No. The Commission set forth its goal regarding QF's in Order 05-584. This Commission's goal has been to encourage the economically efficient development of these qualifying facilities (QFs), while protecting ratepayers by ensuring that utilities pay rates equal to that which they would have incurred in lieu of purchasing QF power. [Public Utilities Commission of Oregon, Order 05-584, May 13, 2005, p. 4]

These declining rates are a function of both the use of a surplus period and the forecasts of declining natural gas prices. I agree that natural gas prices will decline in the near term, but disagree with the starting price assumed by the utilities and the rates of decline.

Q. Are PacifiCorp and PGE currently acquiring resources?

A. Yes, they are. According to PacifiCorp's Integrated Resource Plan Update;

> PacifiCorp continues to expect a gap in electric supply resources to serve customer demand in coming years. PacifiCorp expects increases in both customer peak use and basic demand. The expirations of purchase

> contracts and the anticipated loss of generation capability due to hydro electric re-licensing will increase the gap between demand and supply. Prompt and focused action continues to be needed to close this gap and shield PacifiCorp and its customers from increasing cost, reliability concerns, and market risk. [Integrated Resource Plan Update, 2004, p. 2.]

The Action Plan calls for the acquisition of 88 MW of Class 1 and 200 MWa of Class 2 DSM in the summer and fall of 2005; 1,400 MW of renewable resources in 2006, distributed generation, and 575 MW of thermal generation in the next 8 years.

According to PGE's Integrated Resource Plan:

> We have identified a gap between PGE's current resources and the electric service we will supply our customers during 2007. Table 3, below, shows a 773 MWa gap between the amount of energy our customers will use, on average, during 2007 and the amount of energy our current resources provide. It also shows a gap of 1,910 MW between the amount of capacity our current resources provide and the amount of capacity our customers require during a peak hour that occurs, on average, once every two years. Our capacity gap includes operating reserves of six percent, about 235 MW, and planning reserves of 235 MW.

And,

> The targets indicate the duration of resources we intend to acquire to fill the gaps. For purposes of energy, mid- and long-term refers to resources of at least five years' duration. For capacity, the mid- to long-term refers to resources of at least two years' duration. We propose to acquire about 790 MWa of energy, and about 955 MW more of capacity, from mid- to long-term resources, *after accounting for the capacity value that filling the energy target will bring*. [Portland General Electric Co. FINAL ACTION PLAN 2002 Integrated Resource Plan]

The Oregon Commission, in Order 04-3375, outlined PGE's action item as,

> 1. Build or acquire 350 MWa of a high efficiency gas-fired resource.

> 2. Acquire 25 MW of duct firing capability for peak loads and economic dispatch.
> 3. Acquire approximately 65 MWa (195 MW) of wind generation, provided that the necessary transmission and integration services can be obtained, and that ETO funds permit a price within the range of other alternatives.
> 4. Acquire 135 MWa in fixed price PPAs for durations of five to ten years.
> 5. Acquire up to 50 MWa of baseload energy tolling in place of fixed price PPAs if required, and 400 MW of tolling capability for peak purposes.
> 6. Rely on the ETO to achieve 55 MWa of energy efficiency in PGE's service territory by 2007.
> 7. Evaluate the market potential for combined heat and power systems at customer sites.
> 8. Build a "virtual" peaking plant from 30 MW of dispatchable standby generation.
> 9. Acquire capacity through customer demand reduction programs.
> 10. Acquire short-term energy supply to meet the average annual energy need for direct access customers. [Public Utilities Commission of Oregon, Order No. 04-375, LC33, July, 2004.]

Q. How do you reconcile the fact both PacifiCorp and PGE filed QF rates with sufficiency periods while at the same time they are actively acquiring resources?

A. I can't reconcile this paradox. In my direct testimony filed in this Docket, I recommended the Oregon Commission follow the Idaho Public Utilities Commission's rejection of the sufficiency period for the determination of QF rates. As stated in my earlier testimony,

> The insertion of a surplus period in the calculation of avoided cost rates unfairly and artificially lowers the avoided cost rate. Utilities must construct new plant IN ADVANCE of need, not after. Therefore new plant will always be built by utilities prior to their first deficit year. That is prudent planning. The utilities, however, are able to ratebase their new plant when it comes on line and therefore the ratepayers pay the utilities full value for plant that is on line during the surplus period. That is, ratepayers pay both capacity and energy costs for ratebased plant during

> times of surplus. The QF industry should not be discriminated against and hence should be treated no differently. [Direct Testimony of Don Reading, UM1129, p. 12.]

Q. What did the Idaho Commission say about a surplus period in calculation of rates?

A. After many years of experience the Idaho Commission concluded:

> The record supports a finding that continued use of the first deficit year is administratively burdensome and no longer practicable. We therefore accept Staff and IEPI's proposals to abandon the first deficit year. In doing so, we acknowledge that we effectively eliminate the need for related variables including surplus energy costs, surplus cost base year and surplus escalation rate. Most utilities in the northwest are experiencing intermittent and seasonal shortages. The utilities before us are just now beginning to admit that they have capacity needs as well as energy needs. We find it appropriate to create an avoided cost that contains the full value for both energy and capacity. [Idaho Public Utilities Commission, Order No. 29124, pgs 8-9, September, 2002.]

Q. What did the Oregon Commission say about the use of the surplus period in the calculation of QF rates?

A. The Commission was reluctant to abandon its historic position of use of a utility's surplus position and accepted the calculation of the avoided cost rate that is differentiated based on a utility's resource position. The Commission also stated,

> The calculation of avoided costs when a utility is in a resource deficient position should reflect longer term resource decisions that are subject to deferral or avoidance due to QF power purchases. Although a utility may acquire market resources as demand gradually builds, at some point the increase in demand warrants the utility making plans to build or acquire long-term generation resources. At that point, calculation of avoided costs should reflect the potential deferral or avoidance of such generation

> resources.[Public Utilities Commission of Oregon, Order No. 05-584, UM1129, May, 2005.]

Since both PGE and PacifiCorp are currently acquiring resources the use of a sufficiency period in the calculation of QF rates is not warranted. It is obvious, when utilities are actively acquiring resources, those resources could be deferred or avoided, to use the Commission's language. It has been two years since this investigation began and QF rates are yet to be established that meet the Commission's goal of encouraging the economically efficient development of QFs while protecting ratepayers by making sure utilities pay rates equal to their own resources. There is ample evidence that no surplus period currently exists for either PacifiCorp or PGE and the Commission should reject its use in the calculation of QF rates at this time.

Q. You said earlier that both the use of the surplus period and forecast natural prices were the cause of the one-third drop in QF rates over the next few years. Could you discuss further the forecast of natural gas prices?

A. Yes. As stated above, the compliance filings by PacifiCorp and PGE each projects a decline in gas prices. PacifiCorp projects from $7.18 MMBtu in 2005 to $5.16 MMBtu in 2010. PGE's forecasted gas price in 2010 is $3.67 MMBtu. While market rates were used by PacifiCorp and PGE for QF rates during the sufficiency period, the natural gas forecast declines, thus bringing down the QF rate at the end of the surplus period. PacifiCorp's forecast of natural gas rates rise again in 2010 and PGE's natural gas forecast shows rates starting up in 2011.

Q. How do the forecast natural gas prices filed by the utilities in this docket compare to the current situation?

A. As we all know current natural gas prices are very high by historical standards. NYMEX has a futures gas market with contracts through 2011. This index is based on Henry Hub prices and is depicted in the graph below.

As can be seen, the near term contracts for gas are over $13 a MMBtu, dropping to a low just over $6 in the summer of 2011, then starting up again with a December 2011 level at $7.28 MMBtu. Northwest utilities do not purchase their gas at Henry Hub prices. The Northwest Power and Conservation Council have developed an adjustment factor for northwest natural gas hubs that reduce the price from Henry Hub. Based on their analysis, I have reduced the NYMEX Henry Hub prices by $0.60 and computed annual averages. As shown in Exhibit 101, these annual rates drop from $11.05 MMBtu in 2006 to $6.17 MMBtu in 2011. Both the utilities' forecasts and the NYMEX forward gas prices drop during the next five years. However; the ending rates for NYMEX are at about the starting rates in the utilities' forecast.

Q. Clearly the natural gas prices used by the utilities at this time do not reflect current market realities. What implications does this fact have for the calculation of QF rates?

A. While both the filed natural gas price forecasts by the utilities and the current NYMEX show declines over the next five years, the significantly higher current gas prices increase the cost of producing electricity. These costs are passed on the consumers by the utilities.

Q. **In your original testimony in this case you filed QF rates based on a generic gas unit. At that time you had a current (2005) gas price of $6.32 MMBtu with no escalation over a 35 year period. How do current natural gas prices affect your**

original calculation of QF rates?

A. I used the NYMEX futures index reduced by $0.60 MMBtu for 2006 through 2011 in the calculation of QF rates presented below. Over that period the adjusted natural gas prices declined approximately 11% per year. I used a 2006 value for natural gas of $11 MMBtu that drops to $6.17 MMBtu in 2011. For the years 2012 and beyond, I use $6.17 MMBtu. As expected, the QF rates using these values are significantly higher in the near term falling to a rate that is about 12% higher after 15 years. Exhibit 102 shows the results of using these realistic natural gas prices. For comparison purposes I used the utilities fixed rates and the non-levelized rates calculated by Sherman County method for both my original filing and those based on the updated natural gas prices.

Q. **Your calculation of QF rates uses your original model. Didn't the Commission establish several different methods in the calculation of QF rates and allow the utilities to use their own models to establish their rates?**

A. Yes. As depicted in the graphs in Exhibit 100 fixed rates, banded gas rates, and gas market rates are displayed. The fixed rates fall between the banded rates as should be expected. These QF rates are those filed by the utilities in this docket. As explained above, the dramatic drop in rates over the next 5 years is a function of the inclusion of the sufficiency period along with the low forecast gas rates. Exhibit 102 compares the QF rates filed by the utilities, Sherman County's QF rates as originally filed, and Sherman

County's model with updated gas prices. Sherman County's method, when using the updated gas prices show rates that are very high over the next few years and then generally track the original filing after 2012. While these prices drop in the near term as do those filed by the utilities, they are reflective of realistic natural gas prices.

Q. What recommendations do you have for the Commission as the result of your analysis?

A. As the above analysis has shown, the Commission should eliminate the surplus period and have the utilities resubmit their compliance filings with updated gas prices based on today's forward gas prices. In this way, the Commission can meet its goal of encouraging QF development, while at the same time insuring both utilities and QFs the same treatment and hence protecting ratepayers. The rates filed by the utilities should look like the ones depicted in Exhibit 102.

Q Does this end your testimony as of December 8, 2005.

A. Yes.

CERTIFICATE OF SERVICE

I HEREBY CERTIFY THAT I HAVE THIS [CLICK HERE AND TYPE DAY] DAY OF [CLICK HERE AND TYPE MONTH] 2005, SERVED THE FOREGOING [CLICK HERE AND TYPE] IN CASE NO. BY HAND CARRYING A COPY THEREOF TO THE FOLLOWING:

[CLICK AND TYPE NAME AND ADDRESS]

____

[Click Here and Type Title]

Bio – Paul Woodin

Paul Woodin
Western Wind Power

Western Wind Power is partnered with specialists in the Northwest Wind business to assist communities in understanding and developing locally owned renewable wind projects. Services include workshops to explore community projects; brainstorm sessions with community leaders to develop long term strategic plans, and then follow up with project design, financing, construction and start up of locally owned projects.

Paul is active in helping create a Community Wind Market in the Pacific Northwest by lobbying for adequate power markets and helping to develop an appetite in the financial community for investment in Community projects.

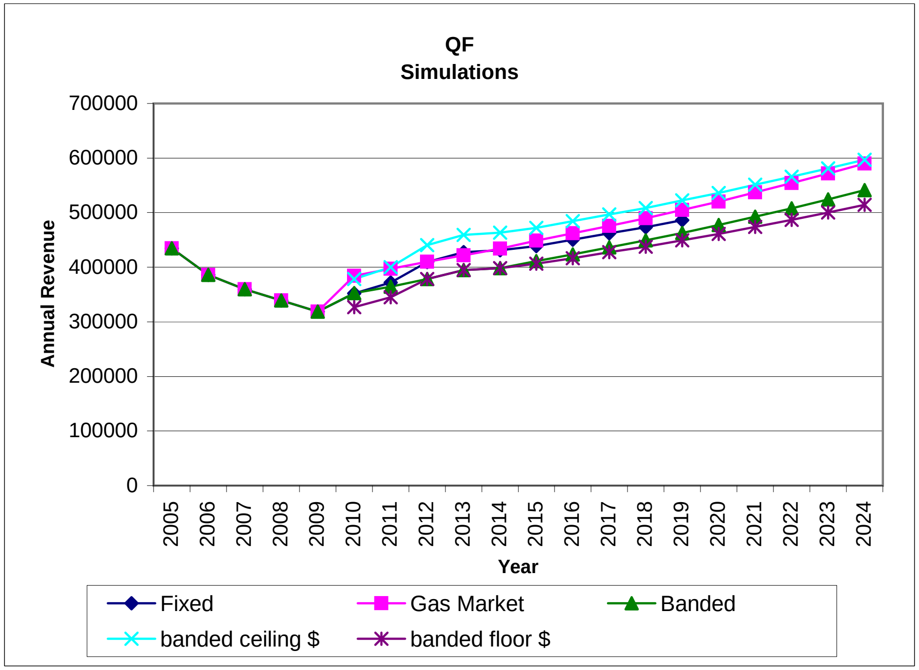
While working for Northwestern Wind Power, Paul developed, permitted, built and operated the 24 MW Klondike Wind Farm in Sherman County, Oregon. The project was conceived, designed, permitted, and constructed in 10 months. During the time the Klondike project was built, he also was Project Manager of a new 10-mile 115-kV transmission line that connects the wind farm into the local BPA grid.

Prior to his experience in wind farm development, Paul worked in the aluminum business serving in various capacities such as Plant Manager of an Aluminum Extrusion Facility and senior management of Engineering/Maintenance, Operations, Computers and IT groups.

PacifiCorp

Production	6,570,000
2010 Price	5.16
Rate Chg	3.20%

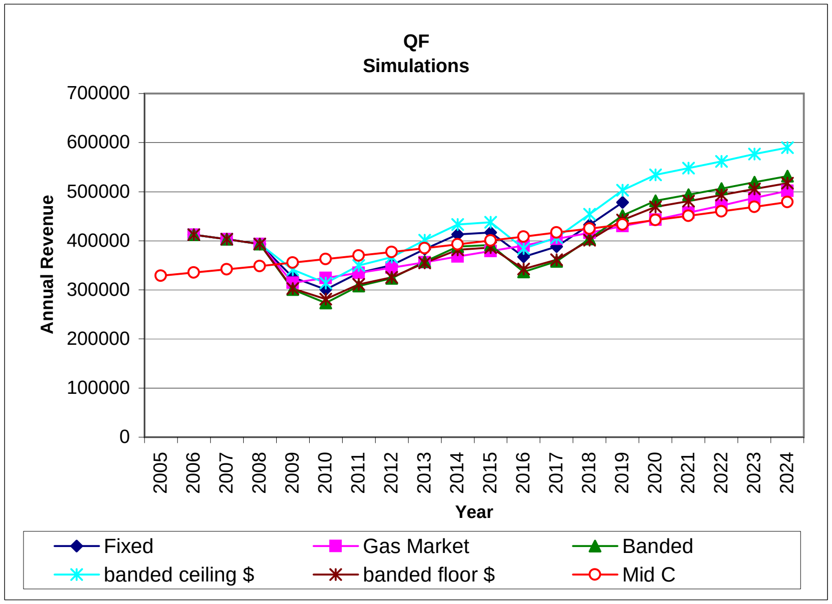
Forecast Opal Gas Index Price $/MMBtu		Year	Fixed	Gas Market	Banded
$7.18		2005	$174,332	$174,332	$174,332
$6.96		2006	$153,634	$153,634	$153,634
$6.38		2007	$141,973	$141,973	$141,973
$5.90		2008	$134,976	$134,976	$134,976
$5.51		2009	$126,230	$126,230	$126,230
$5.16	$5.16	2010	$125,356	$157,213	$125,402
$5.49	$5.16	2011	$133,227	$162,530	$129,644
$6.17	$5.16	2012	$148,969	$167,994	$135,276
$6.48	$5.16	2013	$155,966	$172,879	$141,457
$6.51	$5.16	2014	$156,549	$177,920	$142,055
$6.60	$5.16	2015	$158,881	$183,853	$146,652
$6.77	$5.16	2016	$162,962	$189,587	$151,226
$6.95	$5.16	2017	$167,044	$195,128	$155,646
$7.12	$5.16	2018	$170,834	$200,845	$160,206
$7.31	$5.16	2019	$175,498	$207,112	$165,205
$7.50	$5.16	2020		$213,567	$170,354
$7.70	$5.16	2021		$220,217	$175,658
$7.90	$5.16	2022		$227,068	$181,123
$8.10	$5.16	2023		$234,126	$186,753
$8.31	$5.16	2024		$241,399	$192,554



PGE

Production	6,570,000		
2009 Price	4.50	Mid C 2005	5.00
Rate Chg	3.50%	Escalation	2.0%

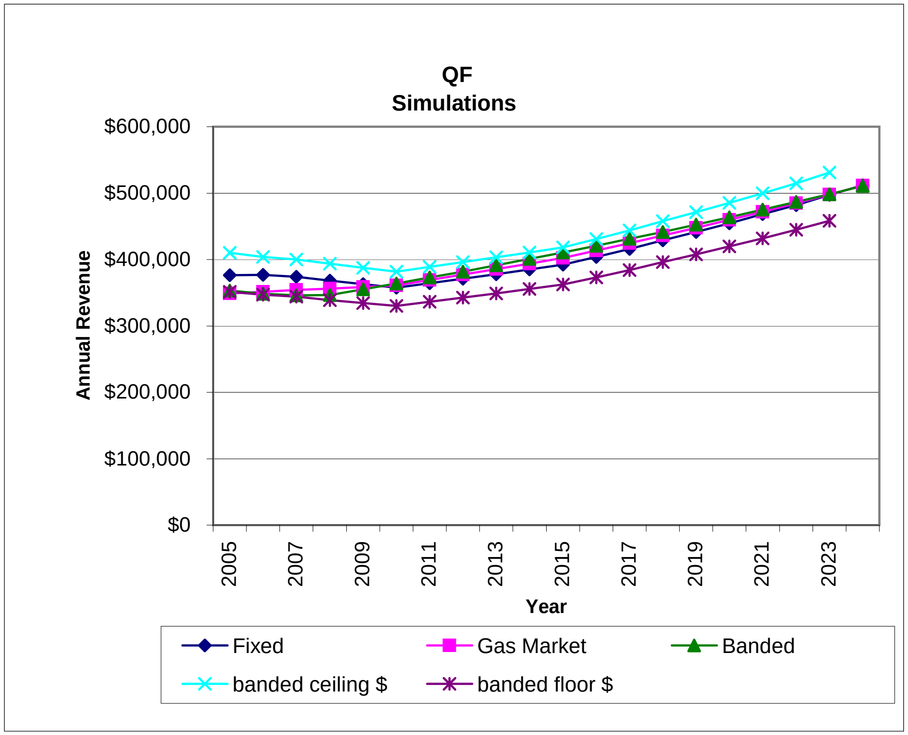
Table 5 Gas Price $/MMBtu		Year	Fixed	Gas Market	Banded	Mid C
		2005				$328,500
		2006	$412,552	$412,552	$412,552	$335,070
		2007	$403,453	$403,453	$403,453	$341,771
		2008	$393,382	$393,382	$393,382	$348,607
$4.28	$4.50	2009	$325,673	$314,483	$301,035	$355,579
$3.67	$4.66	2010	$300,728	$324,123	$273,223	$362,691
$4.33	$4.82	2011	$334,397	$334,549	$308,023	$369,944
$4.60	$4.99	2012	$350,287	$345,131	$323,793	$377,343
$5.23	$5.16	2013	$382,711	$356,216	$357,176	$384,890
$5.80	$5.34	2014	$412,636	$367,622	$387,863	$392,588
$5.82	$5.53	2015	$416,998	$379,170	$391,210	$400,440
$4.67	$5.73	2016	$367,300	$390,305	$336,896	$408,448
$5.03	$5.93	2017	$388,468	$403,502	$357,919	$416,617
$5.91	$6.13	2018	$432,703	$416,162	$403,864	$424,950
$6.82	$6.35	2019	$478,464	$429,614	$451,297	$433,449
$7.38	$6.57	2020		$442,940	$481,545	$442,118
$7.57	$6.80	2021		$457,391	$493,893	$450,960
$7.76	$7.04	2022		$471,903	$506,240	$459,979
$7.95	$7.28	2023		$487,321	$519,237	$469,179
$8.15	$7.54	2024		$501,906	$531,481	$478,562



IPCo

Production	6,570,000
2010 Price	5.00
Rate Chg	2.50%

IRP2004 Sumas Delivered $/MMBtu	Growth Prediction	Year	Fixed	Gas Market	Banded
$4.77	$5.00	2005	$376,321	$349,081	$353,099
$4.85	$5.13	2006	$376,925	$351,093	$348,453
$4.81	$5.25	2007	$373,832	$354,165	$345,794
$4.87	$5.38	2008	$367,973	$356,147	$346,645
$4.96	$5.52	2009	$362,680	$358,495	$355,122
$5.10	$5.66	2010	$357,393	$361,008	$363,831
$5.32	$5.80	2011	$364,432	$369,032	$372,811
$5.53	$5.94	2012	$370,971	$377,135	$381,920
$5.75	$6.09	2013	$378,009	$385,392	$391,236
$6.02	$6.24	2014	$385,157	$393,880	$400,836
$6.28	$6.40	2015	$392,379	$402,563	$410,687
$6.03	$6.56	2016	$403,863	$413,319	$420,759
$6.18	$6.72	2017	$415,883	$424,378	$431,092
$6.38	$6.89	2018	$428,827	$436,009	$441,616
$6.54	$7.06	2019	$441,456	$447,703	$452,485
$6.77	$7.24	2020	$454,576	$459,610	$463,519
$6.78	$7.42	2021	$468,276	$471,959	$474,944
$6.95	$7.61	2022	$482,012	$484,608	$486,617
$7.17	$7.80	2023	$497,201	$497,912	$498,508
$7.54	$7.99	2024	$512,009	$511,270	$510,769
$7.69	$8.19	2025	$526,920	$524,952	$523,295
$7.87	$8.40	2026	$542,762	$539,002	$536,128
$8.06	$8.61	2027	$559,206	$553,858	$549,275
$8.24	$8.82	2028	$575,724	$568,683	$562,742
$8.43	$9.04	2029	$593,313	$583,977	$576,607
$8.61	$9.27	2030	$610,938	$599,638	$590,768

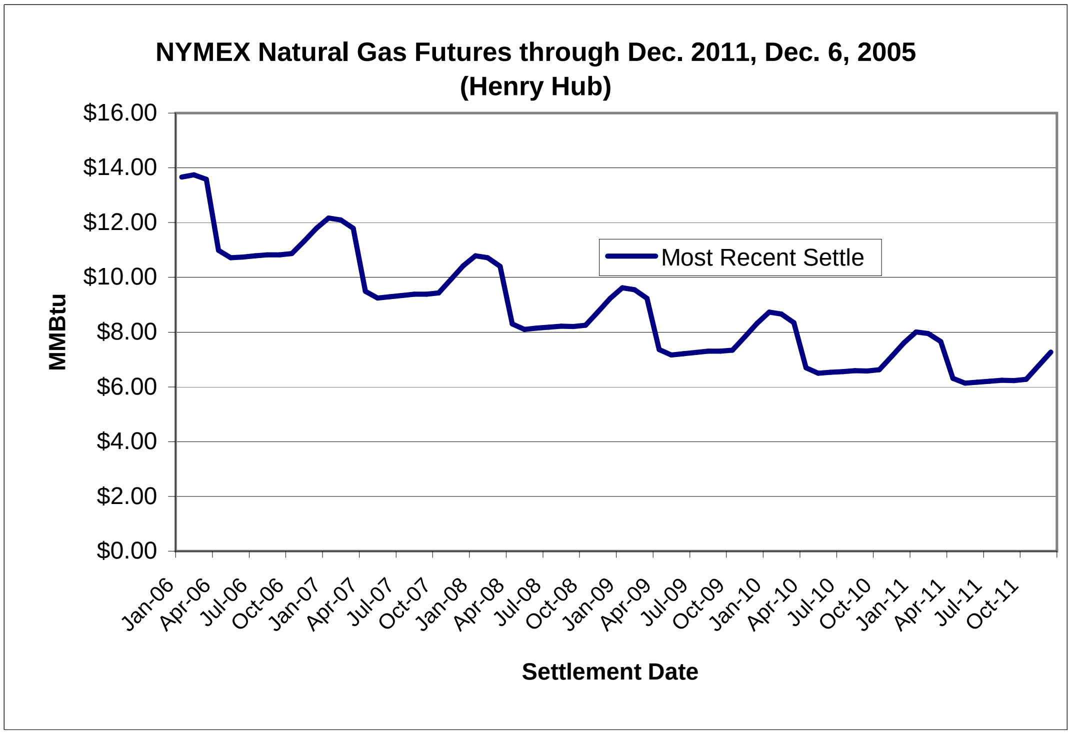


NYMEX Natural Gas Futures through Dec. 2011, Dec. 6, 2005 (Henry Hub)

12/6/2005 Session Expanded Table

	Last	Open High	Open Low	High	Low	Most Recent Settle	Change	Open Interest	Estimated Volume	Last Updated
Jan-06	13.435	13.532	13.532	13.63	13.3	13.66	-0.225	96970	0	12/5/2005 23:08
Feb-06	13.417	0	0	13.75	13.402	13.74	-0.326	36881	0	12/5/2005 23:08
Mar-06	13.345	0	0	13.6	13.24	13.58	-0.238	59521	0	12/5/2005 23:08
Apr-06	10.845	0	0	10.9	10.78	10.98	-0.138	34523	0	12/5/2005 23:08
May-06	10.51	0	0	10.65	10.51	10.71	-0.203	27116	0	12/5/2005 23:08
Jun-06	10.561	0	0	10.683	10.55	10.74	-0.183	11267	0	12/5/2005 23:08
Jul-06	10.728	0	0	10.728	10.728	10.78	-0.056	16159	0	12/5/2005 23:08
Aug-06	10.63	0	0	10.75	10.63	10.83	-0.198	17667	0	12/5/2005 23:08
Sep-06	0	0	0	10.7	10.7	10.82	0	15291	0	12/5/2005 23:08
Oct-06	10.7	0	0	10.7	10.7	10.87	-0.165	25640	0	12/5/2005 23:08
Nov-06	11.2	0	0	11.2	11.2	11.33	-0.13	10513	0	12/5/2005 23:08
Dec-06	11.65	0	0	11.65	11.65	11.79	-0.14	13077	0	12/5/2005 23:08
Jan-07	0	0	0	0	0	12.17	0	13126	0	12/5/2005 23:08
Feb-07	0	0	0	0	0	12.10	0	5960	0	12/5/2005 23:08
Mar-07	0	0	0	0	0	11.80	0	11668	0	12/5/2005 23:08
Apr-07	0	0	0	0	0	9.50	0	11117	0	12/5/2005 23:08
May-07	0	0	0	0	0	9.25	0	14129	0	12/5/2005 23:08
Jun-07	0	0	0	0	0	9.30	0	3666	0	12/5/2005 17:29
Jul-07	0	0	0	0	0	9.34	0	3778	0	12/5/2005 15:17
Aug-07	0	0	0	0	0	9.39	0	3231	0	12/5/2005 15:17
Sep-07	0	0	0	0	0	9.39	0	2443	0	12/5/2005 15:17
Oct-07	0	0	0	0	0	9.44	0	9830	0	12/5/2005 15:17
Nov-07	0	0	0	0	0	9.94	0	3386	0	12/5/2005 15:17
Dec-07	0	0	0	0	0	10.42	0	5168	0	12/5/2005 15:17
Jan-08	0	0	0	0	0	10.79	0	8459	0	12/5/2005 15:17
Feb-08	0	0	0	0	0	10.72	0	1711	0	12/5/2005 15:17
Mar-08	0	0	0	0	0	10.40	0	6455	0	12/5/2005 15:17
Apr-08	0	0	0	0	0	8.30	0	6062	0	12/5/2005 15:17
May-08	0	0	0	0	0	8.10	0	4489	0	12/5/2005 15:17
Jun-08	0	0	0	0	0	8.15	0	1885	0	12/5/2005 15:17
Jul-08	0	0	0	0	0	8.19	0	2062	0	12/5/2005 15:17
Aug-08	0	0	0	0	0	8.22	0	1594	0	12/5/2005 15:17
Sep-08	0	0	0	0	0	8.21	0	1643	0	12/5/2005 15:17
Oct-08	0	0	0	0	0	8.26	0	6015	0	12/5/2005 15:17
Nov-08	0	0	0	0	0	8.75	0	1070	0	12/5/2005 15:17
Dec-08	0	0	0	0	0	9.23	0	5602	0	12/5/2005 15:17
Jan-09	0	0	0	0	0	9.62	0	6649	0	12/5/2005 15:17
Feb-09	0	0	0	0	0	9.55	0	588	0	12/5/2005 15:17
Mar-09	0	0	0	0	0	9.24	0	4688	0	12/5/2005 15:17
Apr-09	0	0	0	0	0	7.37	0	3911	0	12/5/2005 15:17
May-09	0	0	0	0	0	7.17	0	5027	0	12/5/2005 15:17
Jun-09	0	0	0	0	0	7.21	0	754	0	12/5/2005 15:17
Jul-09	0	0	0	0	0	7.26	0	548	0	12/5/2005 15:17
Aug-09	0	0	0	0	0	7.31	0	472	0	12/5/2005 15:17
Sep-09	0	0	0	0	0	7.31	0	740	0	12/5/2005 15:17
Oct-09	0	0	0	0	0	7.34	0	2819	0	12/5/2005 15:17
Nov-09	0	0	0	0	0	7.84	0	402	0	12/5/2005 15:17
Dec-09	0	0	0	0	0	8.33	0	2667	0	12/5/2005 15:17
Jan-10	0	0	0	0	0	8.73	0	2681	0	12/5/2005 15:17
Feb-10	0	0	0	0	0	8.66	0	503	0	12/5/2005 15:17
Mar-10	0	0	0	0	0	8.35	0	1947	0	12/5/2005 15:17
Apr-10	0	0	0	0	0	6.70	0	1185	0	12/5/2005 15:17
May-10	0	0	0	0	0	6.50	0	1240	0	12/5/2005 15:17
Jun-10	0	0	0	0	0	6.53	0	321	0	12/5/2005 15:17
Jul-10	0	0	0	0	0	6.56	0	344	0	12/5/2005 15:17
Aug-10	0	0	0	0	0	6.59	0	373	0	12/5/2005 15:17
Sep-10	0	0	0	0	0	6.58	0	616	0	12/5/2005 15:17
Oct-10	0	0	0	0	0	6.63	0	1119	0	12/5/2005 15:17
Nov-10	0	0	0	0	0	7.12	0	345	0	12/5/2005 15:17
Dec-10	0	0	0	0	0	7.61	0	4521	0	12/5/2005 15:17
Jan-11	0	0	0	0	0	8.01	0	0	0	12/5/2005 15:17
Feb-11	0	0	0	0	0	7.95	0	0	0	12/5/2005 15:17
Mar-11	0	0	0	0	0	7.66	0	0	0	12/5/2005 15:17
Apr-11	0	0	0	0	0	6.31	0	0	0	12/5/2005 15:17
May-11	0	0	0	0	0	6.14	0	10	0	12/5/2005 15:17
Jun-11	0	0	0	0	0	6.17	0	0	0	12/5/2005 15:17
Jul-11	0	0	0	0	0	6.21	0	0	0	12/5/2005 15:17
Aug-11	0	0	0	0	0	6.24	0	0	0	12/5/2005 15:17
Sep-11	0	0	0	0	0	6.24	0	0	0	12/5/2005 15:17
Oct-11	0	0	0	0	0	6.28	0	0	0	12/5/2005 15:17
Nov-11	0	0	0	0	0	6.78	0	0	0	12/5/2005 15:17
Dec-11	0	0	0	0	0	7.28	0	2	0	12/5/2005 15:17

http://www.nymex.com/ng_fut_csf.aspx

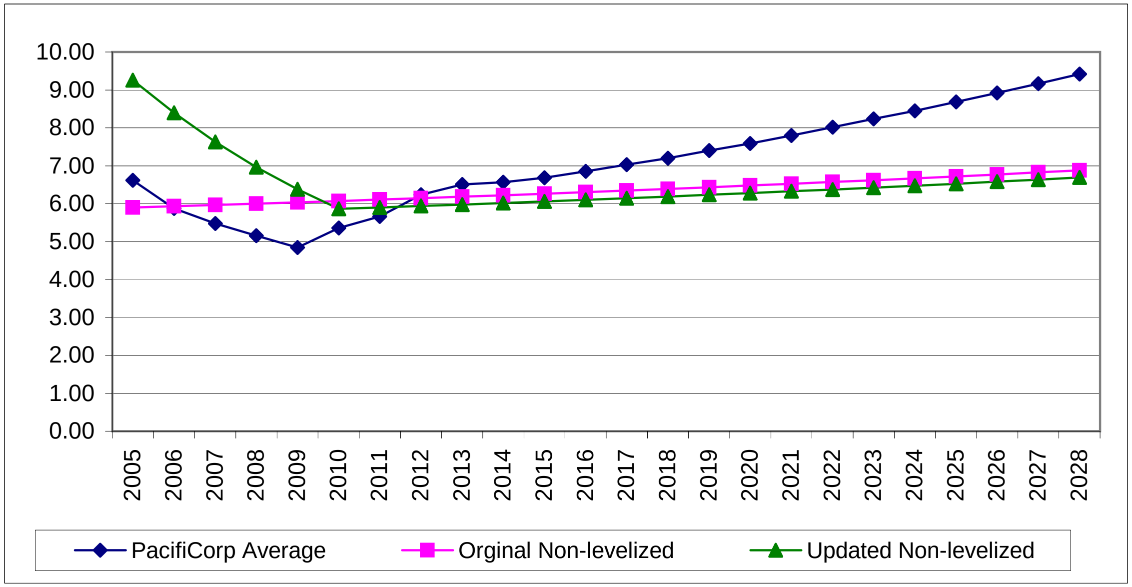


NYMEX Natural Gas Futures through Dec. 2011, Dec. 6, 2005 (Henry Hub)

	Annual Average	Annual Average Adjusted
2006	11.65	11.05
2007	10.17	9.57
2008	8.94	8.34
2009	7.96	7.36
2010	7.21	6.61
2011	6.77	6.17

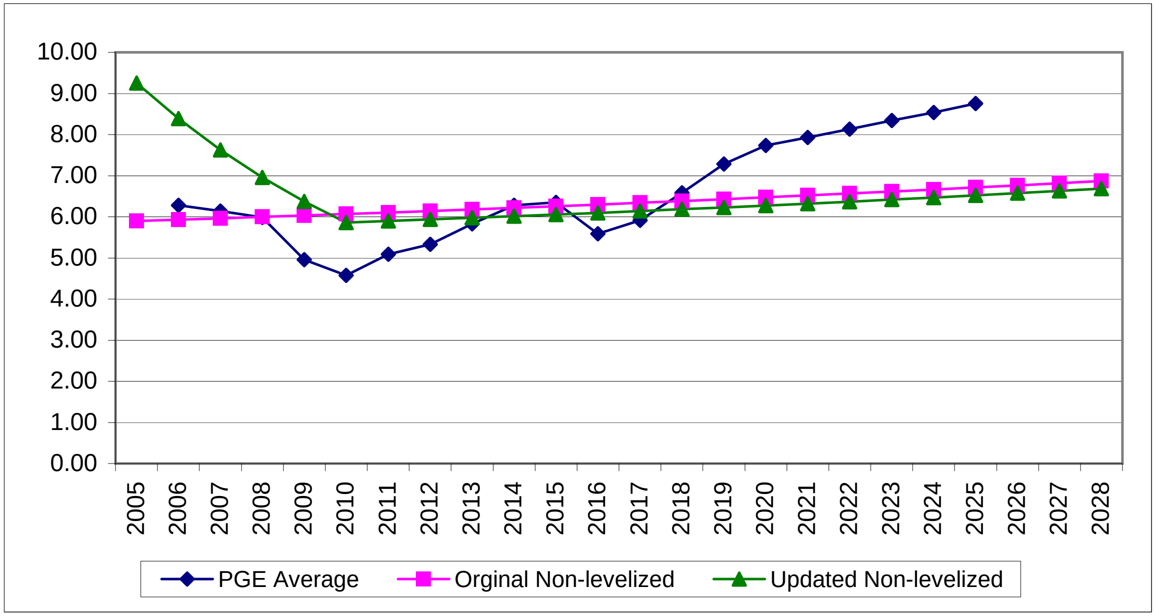
PacifiCorp

Year	PacifiCorp Average	Orginal Non-levelized	Updated Non-levelized
2005	6.62	5.90	9.26
2006	5.88	5.93	8.39
2007	5.48	5.97	7.63
2008	5.16	6.00	6.96
2009	4.85	6.04	6.38
2010	5.36	6.07	5.86
2011	5.67	6.11	5.90
2012	6.23	6.14	5.94
2013	6.51	6.18	5.98
2014	6.57	6.22	6.02
2015	6.68	6.26	6.06
2016	6.85	6.30	6.10
2017	7.03	6.35	6.14
2018	7.20	6.39	6.19
2019	7.40	6.43	6.23
2020	7.59	6.48	6.28
2021	7.80	6.52	6.33
2022	8.01	6.57	6.37
2023	8.23	6.62	6.42
2024	8.45	6.67	6.47
2025	8.69	6.72	6.53
2026	8.92	6.77	6.58
2027	9.16	6.82	6.63
2028	9.41	6.88	6.69



PGE

Year	PGE Average	Orginal Non-levelized	Updated Non-levelized
2005		5.90	9.25
2006	6.28	5.93	8.39
2007	6.14	5.96	7.63
2008	5.99	6.00	6.96
2009	4.96	6.03	6.37
2010	4.58	6.07	5.86
2011	5.09	6.10	5.90
2012	5.33	6.14	5.93
2013	5.83	6.18	5.97
2014	6.28	6.22	6.01
2015	6.35	6.26	6.05
2016	5.59	6.30	6.10
2017	5.91	6.34	6.14
2018	6.59	6.38	6.18
2019	7.28	6.43	6.23
2020	7.73	6.47	6.27
2021	7.93	6.52	6.32
2022	8.13	6.57	6.37
2023	8.34	6.61	6.42
2024	8.53	6.66	6.47
2025	8.75	6.71	6.52
2026		6.77	6.57
2027		6.82	6.63
2028		6.87	6.68



Idaho Power

IPCo Average	Orginal Non-levelized	Updated Non-levelized
5.70	5.89	
5.71	5.93	9.25
5.66	5.96	8.39
5.57	5.99	7.63
5.49	6.03	6.96
5.41	6.06	6.37
5.52	6.10	5.86
5.62	6.14	5.89
5.73	6.18	5.93
5.83	6.22	5.97
5.94	6.25	6.01
6.12	6.30	6.05
6.30	6.34	6.09
6.50	6.38	6.14
6.69	6.42	6.18
6.89	6.47	6.22
7.09	6.51	6.27
7.30	6.56	6.32
7.53	6.61	6.36
7.76	6.66	6.41
7.98	6.71	6.46
8.22	6.76	6.52
8.47	6.81	6.57
8.72	6.87	6.62