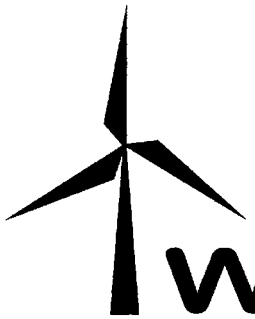

WindWorks Inc.

24 July 2002

sent via e-mail or mail

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Subject: Draft 2002 IPC Integrated Resource Plan
IPUC Case No. IPC-E-02-08

Ladies and Gentlemen:

As background, WindWorks Inc. and its affiliates own and operate over 900 wind turbines in California. In addition, WindWorks Inc.'s affiliate, Washington Winds Inc., recently signed a contract with the Bonneville Power Administration (**"BPA"**) to build the 150 MW Maiden wind project, with an option to increase to 400 MW, located in Benton and Yakima Counties, Washington. As further background, please visit our web site at www.powerworksinc.com.

In recent years, wind power has become increasingly competitive, with wind power rates commonly below $0.04/kWh for utility-scale projects, depending upon various factors, including the wind resource, i.e., the higher the average annual wind speed, the lower the power price. Generally, wind power offers the following substantial economic and environmental benefits to a utility and its ratepayers:

- no risk of power price fluctuations, unlike gas plants, because the fuel source is free;
- wind power is predictable, based upon advanced meteorological models;
- wind power integrates efficiently with the hydro power system;
- a clean, non-polluting (i.e., no emissions) renewable energy source;
- reduces dependence on imported foreign oil and gas;
- no water pollution/consumption, unlike thermal plants;
- no impact to global warming, unlike thermal plants; and
- often, wind power is the least-cost resource when compared fairly to all available resources.

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Therefore, our comments below generally encompass the need for the Idaho Power Company (**"IPC"**) to conduct a fair and detailed analysis of the benefits and cost of wind power, with our expectation that wind power would become identified as one of the most competitive resources in the current Integrated Resource Plan.

Based upon our preliminary review of IPC's draft 2002 Integrated Resource Plan (**"IRP"**) dated May 9, 2002, we have the following questions and comments (generally, in the order mentioned in the IRP document):

1. Wind Power Should be a High Priority Resource. Under Chapter 1, page 5, the IRP identifies six items to be addressed as Near-Term Action Plans, none of which include a wind power project.

Based upon recent wind industry competitive power rates (commonly, below $0.04/kwh) proposed to various utilities around the western U.S. and the various economic and environmental benefits mentioned above, we believe (as discussed hereinafter) a utility-scale wind power project would be one of IPC's lowest cost resources, therefore, a wind power project should be moved into the high priority, six items list, as a Near-Term Action Plan. In addition, under page 4, the "Four Resource Strategies Analyzed" should include a fifth strategy that includes a utility-scale wind power project.

2. IPC's Proposed "Pilot" Wind Project is Unnecessary. Under Chapter 1, page 5, Additional Steps, item 2, and Chapter 7, page 61, item 2, the IRP addresses an interest in a "pilot" wind project, possibly followed by a utility-scale (50 to 100 MW) wind project.

Wind power is a mature technology with over 25,000 MW installed world-wide. In addition, a small, pilot wind project would not obtain the cost benefits of economy of scale, and thus, would necessarily incur higher power costs, thereby wrongly finding wind to be a higher cost resource. We are not aware of any utility in the U.S. proposing a pilot wind project, rather, utility-scale wind projects are being built at record rates by utilities across the nation and around the world. IPC's proposed pilot project is ill-advised and unnecessary.

3. Wind Power Integrates Efficiently with IPC's Hydro Power-Energy Storage System. Under Chapter 3, page 13, the IRP notes that "Water storage in the Brownlee reservoir also enables the Hells Canyon Complex to provide the major portion of IPC's peaking and load-following capability." Further, under Chapter 5, page 44, the IRP notes "The operating flexibility of the existing Idaho Power hydro system already provides a significant amount of energy storage."

Therefore, when the wind blows, the hydro power system can store energy if necessary, and when the wind is absent, the hydro power system provides the necessary peaking and load-following capability (which is consistent with BPA's plans to integrate our 150 MW Maiden wind project into their hydro system). The IRP does not indicate the "depth" of the hydro storage capability, which would be useful to understand. However, IPC indicates that its spinning reserves equate to 330 MW (per page 23). We suggest that IPC conduct a resource modeling review to verify the efficient integration of wind power with its system. If necessary, we can support IPC's effort with the necessary Idaho wind data which can be used to simulate an operating wind project.

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4. Wind Power Should be Included in IPC's Planning Scenarios. Under Chapter 4, pages 27 - 29, the IRP shows an evaluation of energy and peak-hour surpluses/deficiencies under various water and load conditions. Since it is difficult to understand the benefits of wind power without a similar analysis, we suggest that IPC conduct an analysis to include wind power under such conditions, possibly with and without the proposed Garnet gas project. We suggest that IPC evaluate the following wind project sizes at a 30% capacity factor (which is a reasonable capacity factor for Idaho wind resources), with an on-line date of about 2005: 10 MW, 80 MW, and 170 MW. If necessary, we can support IPC's effort with the necessary Idaho wind data which can be used to simulate an operating wind project.

5. Wind Power is Evaluated Unfairly Against Fossil-Fired Resources. Under Chapter 5, page 38, the IRP shows an evaluation of various power sources, including wind power, with the ranking based upon $/MWh; in Figure 11, a 50 MW wind project is ranked 7th, behind coal, geothermal, oil and gas, while in Figure 12, a 10 MW wind project is ranked last.

IPC compares a larger 428 MW coal project and a larger 250 MW oil/gas project to a smaller wind project, which is very unfair because of the economy of scale favors the larger projects. A utility-scale 170 MW wind project would have significantly lower power cost than a 50 MW wind project or 10 MW wind project, which would unquestionably change the ranking of IPC's power resources.

Therefore, we suggest that IPC re-evaluate their proposed resources with the following Idaho wind project cost criteria (which is based upon the actual cost of a proposed wind project in Idaho with average wind speeds):

1.	80 MW	$0.042/kwh	excluding societal & environmental benefits
2.	170 MW	$0.039/kwh	excluding societal & environmental benefits

In addition, as a general industry rule based upon operating experience, a utility should be able to integrate a wind power project equal to at least 10% to 30% of the utility's peak load, depending upon various load and resource factors, i.e., at IPC's 2002 peak load of 3,013 MW (ref. IPC IRP Technical Appendix, page 4, 2002 Sales and Load Report), a wind power project of at least 301 MW could probably be integrated into their system. Therefore, a 170 MW wind project should be easily integrated into IPC's system. However, at first, we expect the power planners to reject such a project size because of the fear of the unknown—they have never had to schedule wind power before in Idaho. But, once the power planners understand the benefits and predictability of wind power, we expect their attitudes to change.

6. 10 MW Wind Project Capacity Factor Error. Under Chapter 5, page 38, the IRP shows an evaluation of various power sources, including wind power, with the ranking based upon $/MWh; in Figure 12, a 10 MW wind project is shown with a capacity factor of only 23%, ranked last.

We understand that IPC utilized DOE capital costs to approximate the cost of wind power (per page 43), then scaled such costs, as necessary, to fit its preferred, sample project sizes. However, it appears that the capacity factor of 23% is an error, based upon a scaling error from the 50 MW project size. A wind power project is not economically feasible at such a low capacity factor. Instead, the 50 MW wind project and 10 MW wind project would both have the

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same capacity factor—32% in your example, i.e., generally, the capacity factor does not change with project size.

7. Societal Costs. Under Chapter 5, page 45, and Chapter 6, page 51, the IRP shows an evaluation of various externality cost adders for thermal plant emissions. However, there is no detail provided about how such factors are evaluated by IPC under the economic ranking of power resources shown under Figures 11 and 12, page 38, of the IRP. Therefore, we ask that IPC please provide the details of the evaluation of such factors, including the $/MWh assessments for each resource. In addition, we ask that IPC please provide the specific $/MWh values for each resource show in each of the Figures, which would allow us to better compare the resources.

8. Bird Impacts from Wind Power Projects are Insignificant. Under Chapter 5, page 45, the IRP briefly mentions that there may be societal costs associated with renewable wind power projects caused from bird mortality. However, based upon recent industry studies of wind power projects, conducted by BPA, the avian impacts from the vast majority of wind projects equal about one to two accidental deaths per wind turbine per year. Such avian impacts are insignificant, especially when compared to other, common avian impacts, including:

- house cats kill an estimated 100 million birds per year;
- hunters kill an estimated 100 million birds per year;
- plate glass kills at least 100 million birds per year;
- autos kill an estimated 60 - 80 million birds per year.

We also wonder how many birds (and other wildlife) will be saved because they're breathing clean air, instead of the likely alternative—coal or gas emissions?

Also, the environmental impacts from a wind project are dwarfed by the environmental impacts caused by a gas or coal project. Generally, virtually all environmental groups support wind power.

9. IPC's Gas Price Forecast Consistently Underestimates the Cost of Gas. Under Chapter 5, page 34, and the Technical Appendix, page 42, the IRP provides IPC's gas price forecast, based upon a combination of forward market prices and the Wharton Econometrics Forecast Associates. Obviously, as gas becomes more expensive, wind power becomes more attractive because its fuel source has no cost. Therefore, the gas price forecast is a major factor in determining which resources are acquired first, however, there is very little information about the derivation of IPC's gas price forecast. To accurately determine the least-cost resources, an accurate estimate of the future gas prices is essential, however, the difficulty is the unpredictability and volatility of gas, which increases price risk to Idaho's ratepayers.

First, under the Technical Appendix, page 46, the IRP provides IPC's gas price forecast escalation factors of 1.8% for years 1 – 10, then 2.62% in years 11 – 30, which equates to an average escalation of 2.35% over 30 years. Under the Technical Appendix, page 46, the IRP provides IPC's O&M escalation factor of 2.52%, i.e., inflation. Therefore, IPC assumes that gas will escalate at a rate 11% lower (2.52% inflation v. 2.35% gas) than general inflation, which seems unreasonable on a long-term basis, especially considering the recent rise (and

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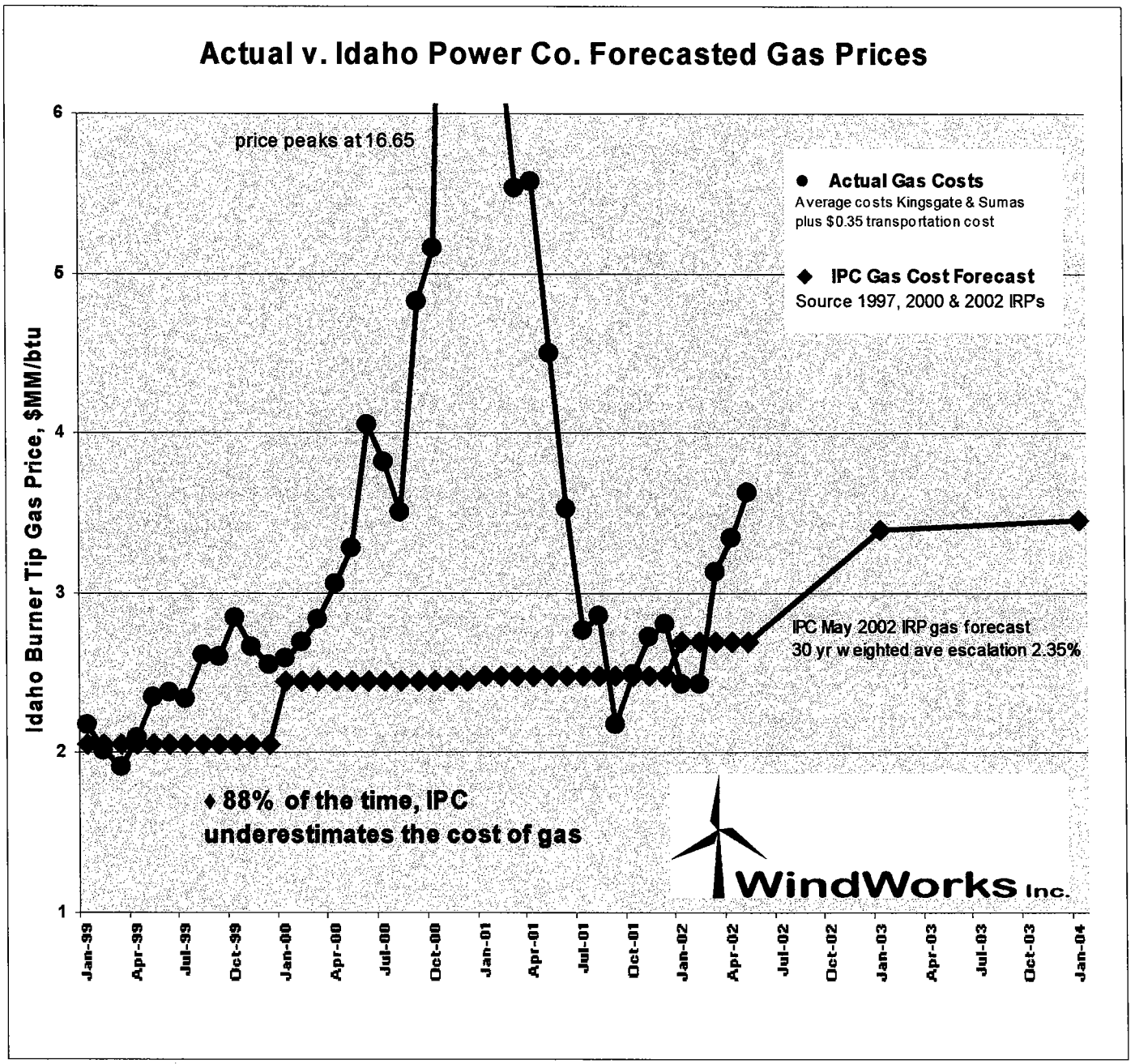
volatility) of gas prices; obviously, this assumption would favor a gas project over a wind project.

In addition, based upon the graph below, 88% of the time (from January 1999 to present—about the past 3½ years), IPC underestimates or under-forecasts the cost of gas, thereby resulting in a favorable bias toward gas projects and against renewables.



Second, we ask that IPC provide the disadvantages of gas price volatility for its rate payers. Under Chapter 6, page 54, the IRP mentions that "It is very difficult to determine a least-cost

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strategy given the uncertainty in market prices; different market prices lead to different strategies." A gas-fired project would provide market uncertainty, while a wind power project would provide market certainty. Therefore, we would ask that IPC provide the advantages of price stability for its rate payers from a wind power project. Further, how is price stability factored into IPC's decision on resource ranking and selection?

Third, we would ask that IPC provide an analysis of the economic disadvantages and reliability issues of buying imported gas versus the economic advantages of acquiring local wind power; we can provide the economics of acquiring local wind power, if necessary. Generally, when IPC buys imported gas, the funds for fuel purchases of the rate payers of Idaho are sent out of state to enrich others. Conversely, a 170 MW wind power project in Idaho would provide economic benefits estimated at over $340 million to the local economy during the life of the project.

10. Long-Term Resource Plan Overlooks Wind Power Without Proper Evaluation. Under Chapter 6, page 53, the IRP says that "Idaho Power Company customers have also expressed an interest in conservation and green resource development." However, under IPC's ten-year resource plan strategies in Chapter 6, wind power is not mentioned, yet the people of Idaho have shown this preference. We ask that IPC explain the reason that the interests of its ratepayers are being ignored? Obviously, part of the problem is that IPC has not seriously focused on clean, renewable wind power. We believe that a fair and balanced evaluation of wind power will prove its cost competitiveness in Idaho, which will then require IPC to include wind power in their resource plan strategies.

11. Near-Term Action Plan Provides Insufficient Details. Under Chapter 7, page 61, the IRP addresses Green Energy, and specifically mentions under item 2 that IPC "anticipates developing a wind pilot project within its service territory," possibly followed by a utility-scale wind project contingent upon various factors.

First, the size of IPC's proposed pilot wind project is not defined. Second, the economy of scale of any small, pilot project will prove to be higher cost, including wind power, rather than a utility-scale wind project which would prove to be one of the lowest cost resources. Third, wind power is a mature technology, with over 25,000 MW installed world wide (see additional information below), so why is there a need for a pilot wind project? Once again, a major portion of IPC's strategy obviously favors gas, as indicated in their Near-Term Action Plan, items 3 and 4, page 59 (at least 57% of the proposed new resources are gas), possibly because their unregulated subsidiary will enjoy profits from the Garnet gas project, so wind power is essentially discarded without sufficient evaluation. In summary, IPC should include wind power in their Near-Term Action Plan.

In conclusion, based upon recent statistics from the American Wind Energy Association (see www.awea.org), wind power is the fastest growing power resource in the world—growing at an average annual rate of 30% over the past five years; however, it still accounts for a small portion of the world's electricity supply. Currently, there are over 25,000 MW of wind power installed across the world, including over 4,000 MW in the U.S. Last year alone, about 1,700 MW of wind power was installed in the U.S., which was a record year for the U.S. wind industry. Wind power technology's continued growth is largely underpinned by its steadily improving cost-competitiveness.

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In the Northwest and Western U.S., utility-scale wind power projects have been installed or are in the advanced planning stages (including power contracts signed or being negotiated by the various utilities) in Washington, Oregon, Montana, Nevada, California, Wyoming, and Colorado. Idaho seems to be on an island by itself, surrounded by competitive, utility-scale wind power projects. Why?

We hope, based upon our effort here, to help IPC "see" the economic and environmental benefits of wind power for its stockholders and the ratepayers of Idaho.

Please contact me if you have any questions.

Sincerely,

WindWorks Inc.

Rick S. Koebbe
President

cc: Mr. John Prescott, IPC
Mr. Karl Bokenkamp, IPC
Mr. Rick Sterling, IPUC

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