

1
2
3
4 BEFORE THE STATE OF WASHINGTON
5 ENERGY FACILITY SITE EVALUATION COUNCIL
6

7 In the Matter of Application No. 2003-01: EXHIBIT 72 SUP (TG-T)
8 SAGEBRUSH POWER PARTNERS, LLC; RENEWABLE NORTHWEST PROJECT
9 KITTITAS VALLEY WIND POWER SUPPLEMENTAL PRE-FILED DIRECT
10 PROJECT TESTIMONY: TROY GAGLIANO
11
12

13
14 **RNP PREFILED SUPPLEMENTAL DIRECT TESTIMONY**
15 **WITNESS #3: TROY GAGLIANO**

16 Q Please state your name and business address.
17

18 A I am Troy Gagliano with the Renewable Northwest Project (RNP), 917 SW Oak St,
19 Suite 303, Portland OR, 97205.
20

21 Q RNP's previous testimony was submitted by Sonia Ling. Are you RNP's new witness?
22

23 A Yes. I have taken over many of her responsibilities including any issues regarding the
24 Kittitas Valley Wind Power Project (KVVPP).
25

1 Q Is her testimony, which addresses RNP's mission, the Washington Department of Fish
2 and Wildlife Wind Power Guidelines, this project, the state's energy supply, wind power
3 benefits, and wind industry development accurate?
4

5 A Yes.
6

7 Q Are you sponsoring any new exhibits to enter into the record?
8

9 A Yes. I would like to enter 5 exhibits into the record.
10

11 Q Please identify these exhibits.
12

13 A These exhibits provide evidence that wind power is saving customers money and
14 benefiting rural economies in the Northwest. Also included is information from the
15 University of Washington on how climate change is expected to impact Washington's
16 economy.
17

18 Exhibit 72-1 SUP (TG-1) is from page 8 of Puget Sound Energy's 2005 Annual
19 Report. The utility reports that the wind power it has invested in will save customers
20 an estimated \$170 million over the next 20 years.
21

22 Exhibit 72-2 SUP (TG-2) describes the positive economic development impacts that
23 wind power is having in Sherman County, Oregon. Similar economic development can
24 be expected from the KVVPP.
25

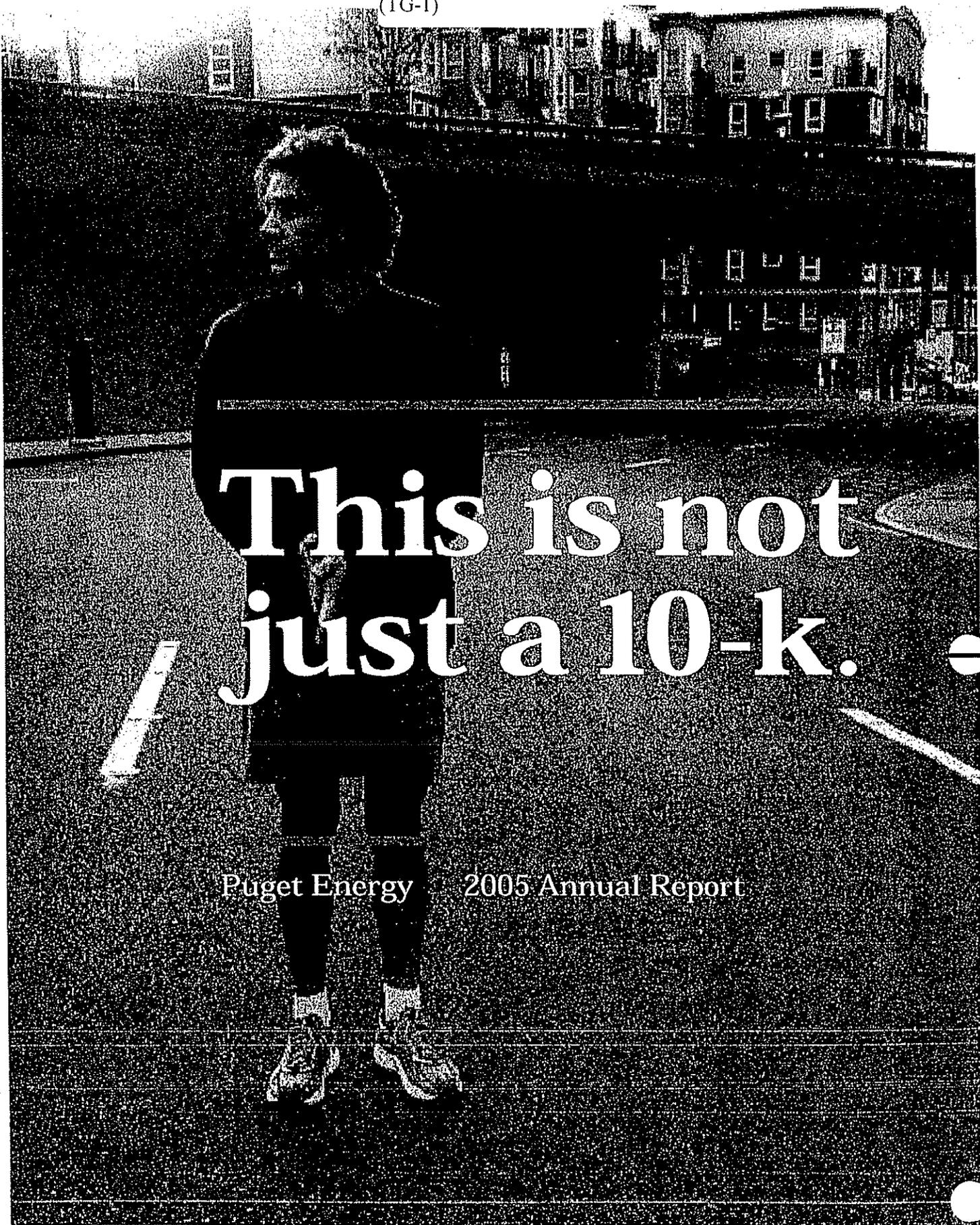
1 Exhibit 72-3 SUP (TG-3) is a summary of a report from the University of
2 Washington's Joint Institute for the Study of the Atmosphere and Ocean which details
3 the many ways that climate change is likely to impact Washington's economy. Using
4 more renewable resources like wind is a major step toward reducing carbon dioxide
5 pollution and protecting citizens from these impacts.

6
7 Exhibit 72-4 SUP (TG-4) features information showing recent increases in the price
8 and volatility of natural gas, coal and uranium. Using projects like the KVVPP to tap
9 more homegrown renewable energy will protect electricity customers from these
10 volatile and unpredictable fuel prices.

11
12 Exhibit 72-5 SUP (TG-5) is a map showing some of the coal plants proposed across the
13 western U.S. Nationwide, more than 150 coal plants have been proposed. The vast
14 majority of these, approximately 84%, would use old pulverized coal technology, only
15 the small remaining percentage would use new technology. None of these coal plants
16 would actually capture and sequester the carbon dioxide to prevent it from being
17 emitted into the atmosphere. It is expected that the output from these new plants would
18 increase total U.S. carbon dioxide emissions by 10%.¹

19
20
21
22
23
24
25

¹ "Making Sense of the Coal Rush," OSPIRG Foundation, July 2006.



**This is not
just a 10-k.**

Puget Energy 2005 Annual Report

FELLOW SHAREHOLDERS

As the cover to this year's Annual Report suggests, our Company's drive to reach its goals is not a sprint to some nearby finish line. We're not looking for a quick victory. No, ours is a strategically paced, long-distance run—a marathon, of sorts, that requires a patient, focused, unwavering commitment to continually improve, get stronger and achieve results.

When I started at Puget Energy four years ago, I made a commitment to restore the Company's quality of customer service, to restore our image and standing within the community, and to restore our financial health. I knew these objectives wouldn't be realized overnight. A 10-k is a long race. A marathon is even longer. The trek we're on is far from over.

But we've set the right tempo. We've hit our stride.

We are delivering first-rate utility service—safe, reliable, cost-effective. It's fundamental to everything we do.

We are being recognized across the Pacific Northwest as a dynamic, innovative leader in energy efficiency and the development of new energy supplies.

And step by step, we are rebuilding our financial strength. How? By managing our costs. By developing a capital structure that supports our need to invest in our business. By seeking regulatory policies that give our shareholders a reasonable opportunity to earn a fair return on the capital we deploy. And by remaining alert for new growth opportunities.

I believe the Company passed several critical milestones in 2005 on the long-distance course we're running. We achieved some solid results and made considerable progress on our goals.

One example of our improving pace was the 15-million-share sale of Puget Energy stock. This stock issuance enhanced the Company's capital structure to 44 percent equity—a remarkable balance sheet improvement over the 30 percent equity-to-debt ratio we had when I joined the Company.

Another noteworthy accomplishment in 2005 was the negotiation of a new, 20-year power-purchase arrangement between our utility subsidiary, Puget Sound Energy (PSE),

and its good neighbor and fellow Pacific Northwest utility, Chelan County Public Utility District. This contract, which maintains our 50-year relationship, ensures that our customers continue to receive the benefits of low-cost Columbia River hydropower through 2031.

We also posted the best 12-month generating output ever from PSE's largest electricity producer, the Colstrip Power Plant in eastern Montana. In addition, we moved closer to landing a new federal operating license for PSE's largest hydropower facility, the Baker River Project. We expect to have a new 40- to 45-year license in hand before the end of 2006.

Meanwhile, we issued a major request for proposals to expand PSE's energy efficiency services and to procure up to 1,500 average-megawatts of new power-supply resources. Both initiatives are vital to serving our customers' growing needs. An evaluation of the submitted proposals should be completed this spring, followed by contract discussions with finalists later this year.

The past year was successful, too, from an operations standpoint. We met or exceeded 10 of the 11 benchmarks that state regulators track to measure customer service quality. This performance achievement illustrates the skill of our employees and the pride they have in their work.

We also gained ground in 2005 on the regulatory front. State regulators granted PSE two small rate adjustments that are helping us serve the utility's growing customer base. The second of these two rate changes—a "power-cost-only" decision that was unanimously endorsed by outside parties—authorized full recovery of construction costs for our new Hopkins Ridge Wind Project.

Hopkins Ridge started delivering clean, renewable power to our customers last November. We expect our second wind farm, Wild Horse, to be up and running by the end of this year. Together, they'll produce enough electricity to serve approximately 120,000 households. Better yet, they'll reduce PSE's net power costs by an estimated \$170 million over the next 20 years.

Our Company is fortunate to serve a robust, growing region. We add 30,000 to 35,000 natural gas and electric



Windfall from the Wind Farm

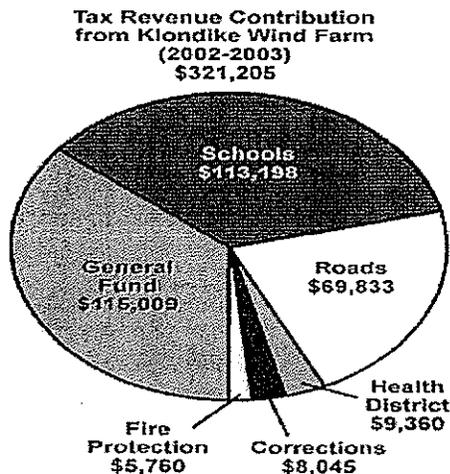
Rural counties and landowners in the Pacific Northwest are harvesting a new crop. Large, utility-scale wind energy projects can add to a county's tax base and support essential services such as schools and fire departments. These projects also can generate revenue for individual farmers as well as local and regional businesses. Wind turbines are compatible with farming, occupy little land and can pay farmers many times what they earn per acre harvesting crops.

A new report from the Renewable Northwest Project titled "Windfall from the Wind Farm; Sherman County, Oregon" details the economic development benefits to the county and to Oregon businesses resulting from the Klondike Wind Farm. Sherman County is a prime example of a rural community that is harnessing its wind resource and reaping the benefits. Revenue from the wind farm is helping to diversify this historically single-engine economy that is under increased stress from low wheat prices and decreasing harvests.

PPM Energy, an energy company based in Portland, Oregon owns the Klondike Wind Farm. The project, which came on line in 2001, consists of sixteen wind turbines that can generate up to 24 megawatts (MW) of electricity; enough to power approximately 6,100 homes in the Pacific Northwest. The project is located on land cultivated for wheat farming and removes only seven acres of land from production. While the physical footprint of the wind farm is small, the economic benefit is substantial.

Property Tax Benefits

During its first year of operation, the Klondike Wind Farm generated \$321,205 in property tax revenue for Sherman County. This amount represents a 10 percent increase in the county's total tax revenue over the previous year. Figure 1 illustrates how the county is using this new revenue to support a variety of essential services. According to the county tax assessor, the project is expected to generate approximately \$250,000 in property taxes each year over its 20 to 30 year lifetime. "Wind power helps to diversify the economy. It's another crop we can harvest and it helps fill gaps in the county budget," says County Judge Mike McArthur.



Landowner Benefits

Farmers in Sherman County who lease their land to wind developers receive annual royalty payments of between \$2,000 and \$4,000 for each turbine sited on their property.

According to Lee Kaseberg, a local wheat and wind farmer, the turbines are compatible with farming operations. "Put them up, we can farm around them easily," declares Kaseberg.

Four workers periodically maintain the

turbines and access them via new roads that were built as part of the project. A neighboring farmer, John Hilderbrand, adds, "The new roads allow easier access to my fields. Plus, the turbines make money in the winter when I can't work my land."

Other Local Benefits

A variety of local and regional businesses took part in the planning, development and construction of the wind farm including many Oregon businesses from Canby, Hood River, Portland and Wasco.

"Wind power helps to diversify the economy. It's another crop we can harvest, [and] it helps fill gaps in the county budget."

Mike McArthur
County Judge

Approximately 80 to 100 workers were involved in the construction phase alone and local establishments experienced a boom as these workers patronized local motels, restaurants and grocery stores. Occupancy rates skyrocketed at the Tall Winds Motel in Moro, at motels in the towns of The Dalles and Biggs Junction, and at the RV park in Wasco. Workers also bought gasoline from the local Hardware Co-op. The owners of the Lean-to Café, one of the few restaurants near the project, added on to their building with profits from increased business associated with the wind farm construction. The restaurant owners also plan to build a new motel and buy a mobile kitchen to serve the needs of working crews as the project expands. Due to the quality wind resource and supportive

local community, PPM Energy is quadrupling the size of the Klondike wind farm and Portland General Electric is buying all additional 75 megawatts of Phase II.

“The turbines make money in the winter when I can’t work my land.”

Lee Kaseberg
wheat and wind farmer

Environmental Assessment

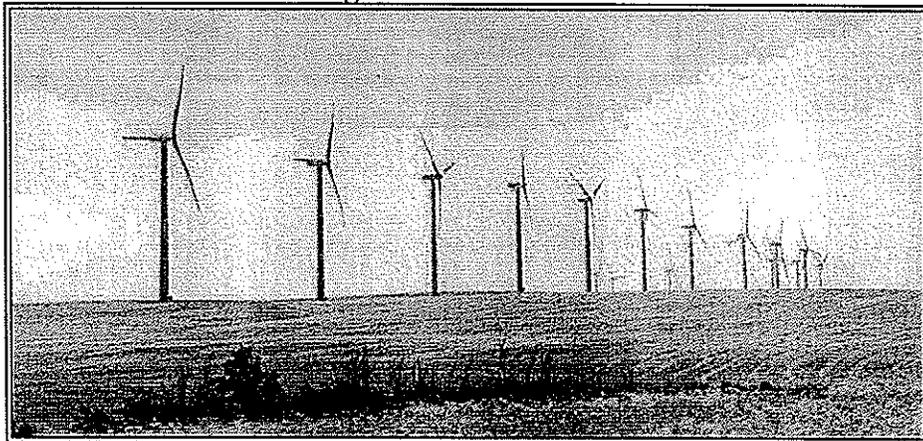
The environmental assessment for this project revealed minimal impacts to habitat and wildlife. The project does not disturb any natural habitat since it is built completely on tilled farmland. Due to a lack of trees and water sources, the local environment is not well suited to host many native or migratory birds. A one-year, post construction study found

minimal impact on birds and the turbines have had no effect on local deer and antelope populations.

Conclusion

Although the Klondike Wind Farm is small relative to other utility-scale wind projects, it is providing a valuable economic development opportunity for Sherman County. The planning and construction phases stimulated local and regional businesses. In its operational phase, the project is generating tax revenue for the county and royalty payments for individual landowners. Large wind power projects are a viable way for rural counties with strong wind resources to diversify their economies and for local farmers to preserve their cherished way of life.

The 24 Megawatt Klondike Wind Farm



These 16 turbines support the local economy through paying county property taxes and royalties to landowners.

Renewable Northwest Project
917 SW Oak St, Suite 303
Portland, OR 97213
503.223.4544
renewables@RNP.org
www.RNP.org



Renewable Northwest Project

Impact of Global Warming on Washington's Economy

The University of Washington's Joint Institute for the Study of the Atmosphere and Ocean has detailed the many ways that global warming is likely to impact Washington's economy¹. The report, titled "Climate Impacts on Washington's Hydropower, Water Supply, Forests, Fish and Agriculture" details various sectors that are vulnerable to the impacts of global warming.

The report explains the possible impacts in the following sectors:

Hydroelectric Power Production

Rising temperatures decreases in snowpack, and shifts in the amount and timing of streamflow will reduce the ability of the hydro system to provide power in ways that Washington and the region have come to expect.

Municipal and Industrial Water Supplies

Increasing temperatures and decreased summer flows could make it more difficult for water suppliers to meet the needs of consumers, especially in snowmelt-fed watersheds.

Flood and Stormwater Management

Rising temperatures and small increases in winter precipitation could lead to unpredictable increases in the frequency of flooding in some river basins.

Forests

As temperatures rise, some tree species will shift their geographic range, migrating to higher elevations and latitudes. Other species will decline because they will be unable to adapt. Also, increasing temperatures would likely create favorable conditions for fire and pest outbreaks, which could become more frequent and severe.

Fisheries

Higher stream and lake temperatures, along with changes in the volume and timing of streamflow, could create environmental conditions that are inhospitable to many Pacific Northwest cold-water fish populations. Salmon, which represent some of the region's most important fish species, are at particular risk.

Agriculture

Increasing temperatures and atmospheric carbon dioxide concentrations will likely increase crop yields in places where sufficient soil moisture or irrigation water is available. However, in areas where soil moisture is projected to decrease, crops could suffer more days of heat and moisture stress. The shifts in the timing of peak streamflow could reduce the availability of irrigation water during the summer when it is needed the most. The increasing temperatures may also enhance threats posed by crop pests and pathogens.

¹ <http://ceses.washington.edu/db/pubs/abstract459.shtml>

Conclusion

Expanding the use of domestic clean, emissions-free renewable resources like wind will protect Washington's economy and the health of its citizens. Renewable resources also play an important role in protecting Washington from the impacts of global warming. Wind is one of the cheapest and cleanest energy resources available today. If electric utilities don't meet their customers' needs with wind energy, the next cheapest option is coal. Burning fossil fuels is a major contributor to global warming and coal is the dominant source of carbon dioxide emissions (ranging from 83% to 86%) since 1990².

² U.S. Energy Information Administration; "U.S. Carbon dioxide Emissions from Energy Sources 2005 Flash Estimate", June 2006.

Wind Power Protects Washingtonians From Rising Fossil Fuel Prices

Washington has an abundance of renewable resources including wind power. Because renewable energy technologies generate power without having to buy fuel, it is possible to know how much the electricity from a wind farm will cost customers for the life of the project (20-30 years). Projects like Horizon's Kittitas Valley Wind Power Project are an investment in stable, predictable priced power.

In contrast, investing in more fossil fuel plants is risky for customers. The price of traditional fuels like coal and natural gas is subject to global market forces and therefore volatile and unpredictable.

Consider these recent increases in the price of natural gas, coal and uranium¹ **Natural Gas** has risen 300% since 1999

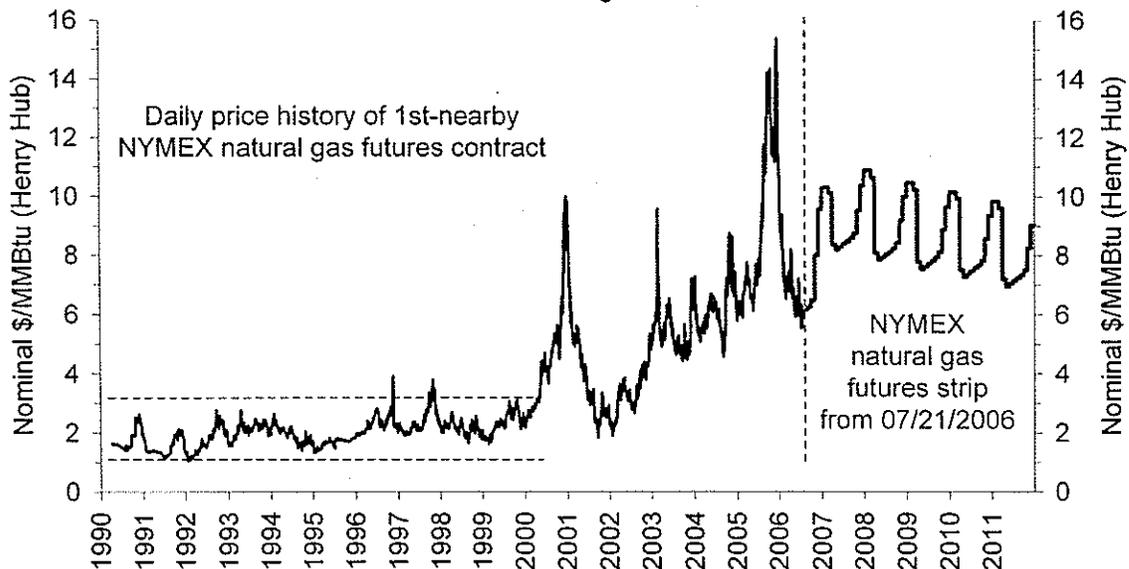
(In contrast to the the graph below, the price of wind power is a flat line.)

Coal has increased 20% between 2003 – 2005.

(Much of the price of coal is tied to the price of oil because mining and transporting coal is very oil-intensive.)

Uranium: up 40% from 2001 to 2005

Natural Gas Prices 1990 to July 2006



Source: Lawrence Berkeley National Laboratory

¹ "Behind the Rise in Prices." *Electric Perspectives*. July/August 2006.

http://www.eei.org/industry_issues/electricity_policy/state_and_local_policies/rising_electricity_costs/Brattle_Report.pdf

Proposed Coal-Fired Power Plants in the Western United States

(Majority would use old, pulverized coal technology)

Thompson River

Pacific Mountain

Lower Columbia

Bridger

QuickTime™ and a
TIFF (LZW) decompressor
are needed to see this picture.

Based on information from: 1) "Clearing California's Coal Shadow From the American West," Dec. 2, 2005. 2) "Utah Coal Could Go Begging," Salt Lake Tribune, 10/31/2005. 3) Western Resource Advocates.
Updated August 2006