

EXHIBIT NO. ___(EMM-16HC)
DOCKET NO. _____
2005 POWER COST ONLY RATE CASE
WITNESS: ERIC M. MARKELL

**BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION**

**WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION,**

Complainant,

v.

PUGET SOUND ENERGY, INC.,

Respondent.

Docket No. UE-_____

**FIFTEENTH EXHIBIT TO THE PREFILED DIRECT TESTIMONY OF
ERIC M. MARKELL (HIGHLY CONFIDENTIAL)
ON BEHALF OF PUGET SOUND ENERGY, INC.**

REDACTED VERSION

JUNE 7, 2005

PUGET SOUND ENERGY, INC.
MINUTES OF THE
BOARD OF DIRECTORS' MEETING
OCTOBER 5, 2004

Pursuant to notice duly given on September 29, 2004 (a copy of which is filed with these minutes), a meeting of the Board of Directors of Puget Sound Energy was held in Puget Sound Energy's Board Room on the 12th Floor of the Puget Sound Energy Building, beginning at 10:30 a.m. Tuesday, October 5, 2004.

The following Directors were present:

- D. P. Beighle
- C. W. Bingham
- P. J. Campbell
- C. W. Cole
- R. L. Dryden
- S. E. Frank
- T. Moriguchi
- K. P. Mortimer
- S. G. Narodick
- S. P. Reynolds

being more than a quorum.

Also present were:

Puget Energy and PSE Management

- J. W. Eldredge, Corporate Secretary and Chief Accounting Officer
- D. E. Gaines, Vice President Finance and Treasurer
- J. L. O'Connor, Vice President and General Counsel
- B. A. Valdman, Senior Vice President Finance and CFO

PSE Management

- K. J. Harris, Vice President Regulatory & Government Affairs
- E. M. Markell, Senior Vice President Energy Resources
- S. McLain, Senior Vice President Operations

InfrastruX Group, Inc.

- Michael Lennon, President and CEO

Mr. Beighle presided and Mr. Eldredge kept the records of the meeting.

RESOURCE ACQUISITION UPDATE

Mr. Beighle then asked Mr. Markell to give the Board an update on PSE energy resource acquisition matters. Mr. Markell then reviewed with the Board a report he had prepared covering an update on PSE's strategies to obtain new electric energy resources through its "All-Source" request for power resource proposals. Mr. Markell then updated the Board on specific resources under review currently by management and discussed the status of negotiations with Powerex to obtain a long-term purchased power agreement, the purchase of the Wild Horse wind generation project from Zilka Renewable Energy, the purchase of a small heat recovery generating project from ORMAT Nevada Inc, and other prospects outlined in his report. Mr. Markell reviewed the proposed key dates for each of these projects and advised the Board management would seek approval by the Board of the acquisition agreements and approval from the Washington Commission as a part of an electric "power cost only" rate case or a general tariff rate case proceeding. A copy of Mr. Markell's report was furnished the Board in advance of this meeting and is filed with the minutes. After Mr. Markell's report, Ms. Harris and Mr. Markell left the meeting.

PSE OPERATIONS MATTERS UPDATE

Mr. Beighle then asked Ms. McLain to give an update on significant operations matters.

Ms. McLain reviewed with the Board the status of the gas explosion at a home in Bellevue on September 2, 2004. Ms. McLain advised the Board of the hearing before the WUTC, and that the investigation is ongoing. Ms. McLain stated that the safety and peace of mind of our customers is of highest importance and the Company is developing plans to address any issues relating to the system where the explosion occurred.

Resource Acquisition Update to Board of Directors

*Eric M. Markell
Senior Vice President Energy Resources
October 5, 2004*

Power Resource Acquisition Update

*Need: 355 aMW by 2008
1200 aMW by 2012*

Current Opportunities:

- 22-year Seasonally Shaped Power Purchase Agreement
- Wild Horse Wind Project, Ellensburg, WA REDACTED
- Hopkins Ridge Wind Project, Dayton, WA
- [REDACTED] Coal Project, [REDACTED] Gas Project, [REDACTED]
- Recovered Heat Power Project, NWPL Sumas Compressor Station
- Various "Watch List" Projects

Highly Confidential per
WAC 480-07-160

Power Purchase Agreement

Capacity: 140 MW (2005-2006); 240 MW (2007-2026)
Annual Energy: 200,000 MWh (2005-2006); 530,000 MWh (2007-2026)
Seasonal Shape: September-March, On Peak Hours Only

Counterparty: [REDACTED] REDACTED

Counterparty Credit Rating: AA- (S&P)

Energy Source: [REDACTED]

◆ Key sources to include:

[REDACTED]

TEXT IN BOX IS HIGHLY CONFIDENTIAL

Price: \$ [REDACTED] MWh plus [REDACTED] % annual escalation
\$ [REDACTED] MWh 22-year levelized cost
\$ [REDACTED] MWh 22-year levelized with imputed debt cost

Portfolio Savings: \$6MM - \$87MM
((\$6MM - 50/50 gas/coal future); (\$87MM - 100% gas future))

Highly Confidential per
WAC 480-07-160

Power Purchase Agreement (cont.)

Credit Requirements: PSE has proposed a "mutual credit and collateral posting" pass; pending [REDACTED] BOD action on [REDACTED]

Benefits:

- ◆ Firm multi-point system delivery
- ◆ Shaped to PSE's seasonal need
- ◆ No forced outage risk
- ◆ Uses existing transmission; no incremental cost
- ◆ No fuel procurement risk; no fuel hedging requirements
- ◆ No risk of "summer sales", price, or volume

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Risks:

- ◆ Short term under-recovery of \$ [REDACTED] MM until [REDACTED]

REDACTED

Regulatory Rate Treatment:

Wild Horse Wind Project

Developer: Zilkha Renewable Energy

Owner: PSE

Capital Cost: Up to \$ [REDACTED] MM "all-in"

Energy Cost: \$ [REDACTED] MWh, 20-year levelized cost

Production Tax Credit Value: \$ [REDACTED] MWh

REDACTED

Estimated COD: 2Q06

Turbine Choice: Vestas NM82 1.65MW; or GE 1.5MW sle

Size: 200-220MW

Capacity Factor: [REDACTED] %

Rotor Diameter: 82m Vestas NM82; 77m GE sle

Tower Height @ Hub: 70m Vestas NM82; 65m GE sle

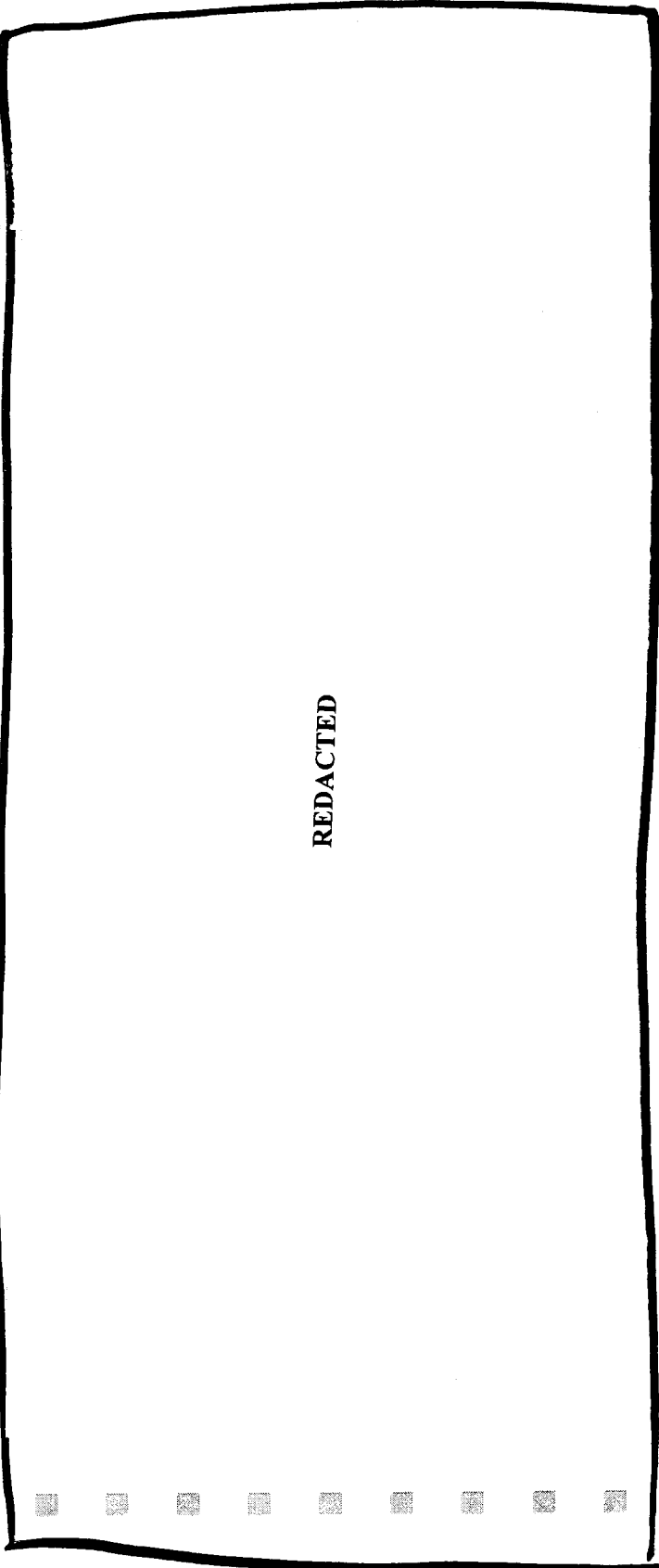
No. Turbines: 133

Project Foot Print: ~8,000 acres

Wild Horse Wind Project

Key Dates

- Non-binding LOI..... Sept 2004
- PTC extension..... Sept 2004



Highly Confidential per
WAC 480-07-160

O&M Operator: Turbine Supplier (2-5 years); PSE thereafter

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Hopkins Ridge Wind Project

Developer: RES North America

Owner: PSE

Capital Cost: \$200 MM "all in"

Energy Cost: \$49/MWh, 20-year levelized cost

Production Tax Credit Value: \$18/MWh

Estimated COD: 2007

Turbine Choice: Vestas V80 1.8MW

Size: 150MW

Capacity Factor: %

Rotor Diameter: 80m

Tower Height @ Hub: 70m

No. Turbines: 83

Project Foot Print: 5000 acres

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REDACTED

Hopkins Ridge Wind Project

Key Dates

■ PTC extension.....	Sept 2004
■ Non-binding LOI.....	Oct 2004
■ PSE Board Action.....	TBD
■ Definitive Agreements.....	2Q05
■ Non-Appealable Permits.....	2Q05
■ Acquisition of Development Assets.....	TBD
■ Notice To Proceed (NTP) to Turbine Supplier.....	2006
■ NTP to Balance of Plant Contractor.....	2006
■ GRC.....	TBD
■ COD.....	2007

O&M Operator: Turbine Supplier (2-5 years); PSE thereafter

Recovered Heat Power Project

Developer: ORMAT Nevada, Inc.

Owner: PSE

Capital Cost: \$ [REDACTED] MM "all in"

Energy Cost: ~ [REDACTED] MWh 20-year levelized cost

Capacity: 4.5MW; 3.8 aMW

Estimated COD: 2006-2007

REDACTED

Technology: Organic Rankine Cycle

Host: NWPL Sumas Compressor Station

Transmission: Transmission request under review by PSE

Highly Confidential per
WAC 480-07-160

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Recovered Heat Power Project

Highly Confidential per
WAC 480-07-160

Key Dates

■ Non-binding LOI.....	Oct 2004
■	
■	
■	
■	
■	

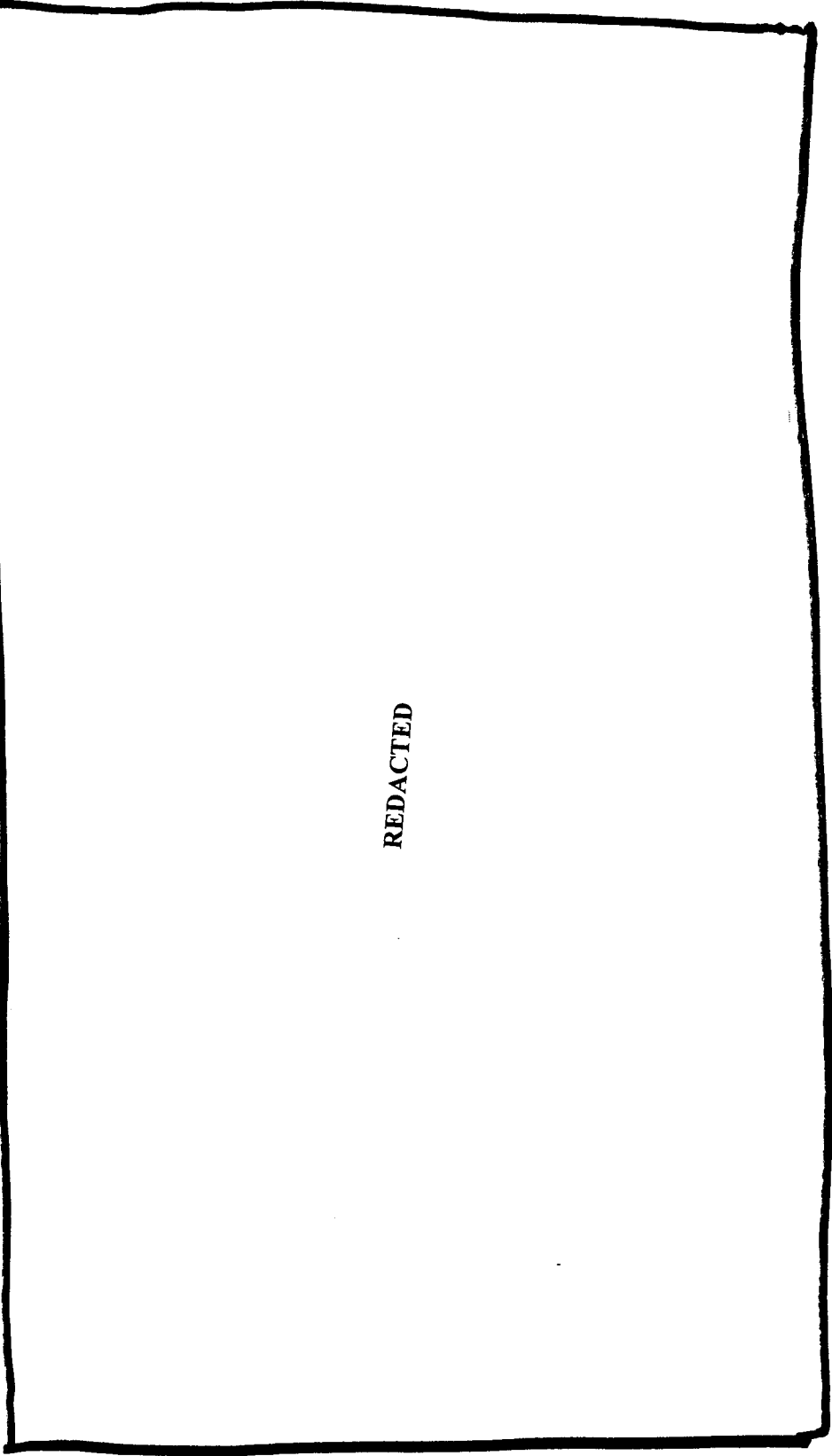
REDACTED

O&M Operator: Turbine Supplier (2-5 years); PSE thereafter

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Highly Confidential per
WAC 480-07-160

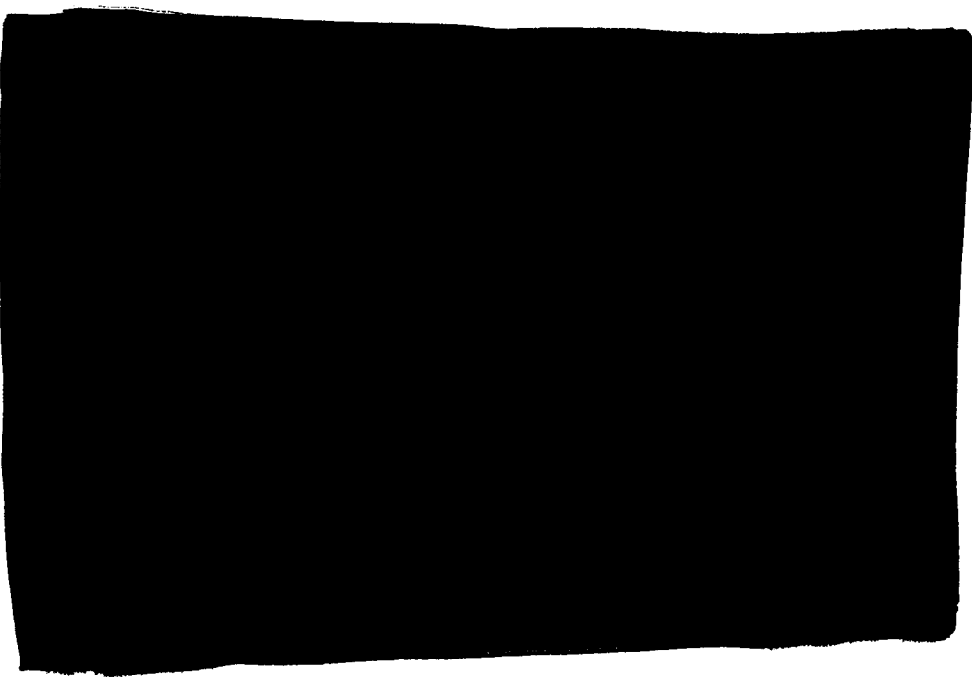
 proposed attractive 10-year PPA; mutual credit concerns makes such transaction improbable



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Watch List Projects

Highly Confidential per
WAC 480-07-160



Biomass
Coal
Natural Gas
Natural Gas
Natural Gas
Natural Gas
Natural Gas
Natural Gas
Wind
Wind
Wind

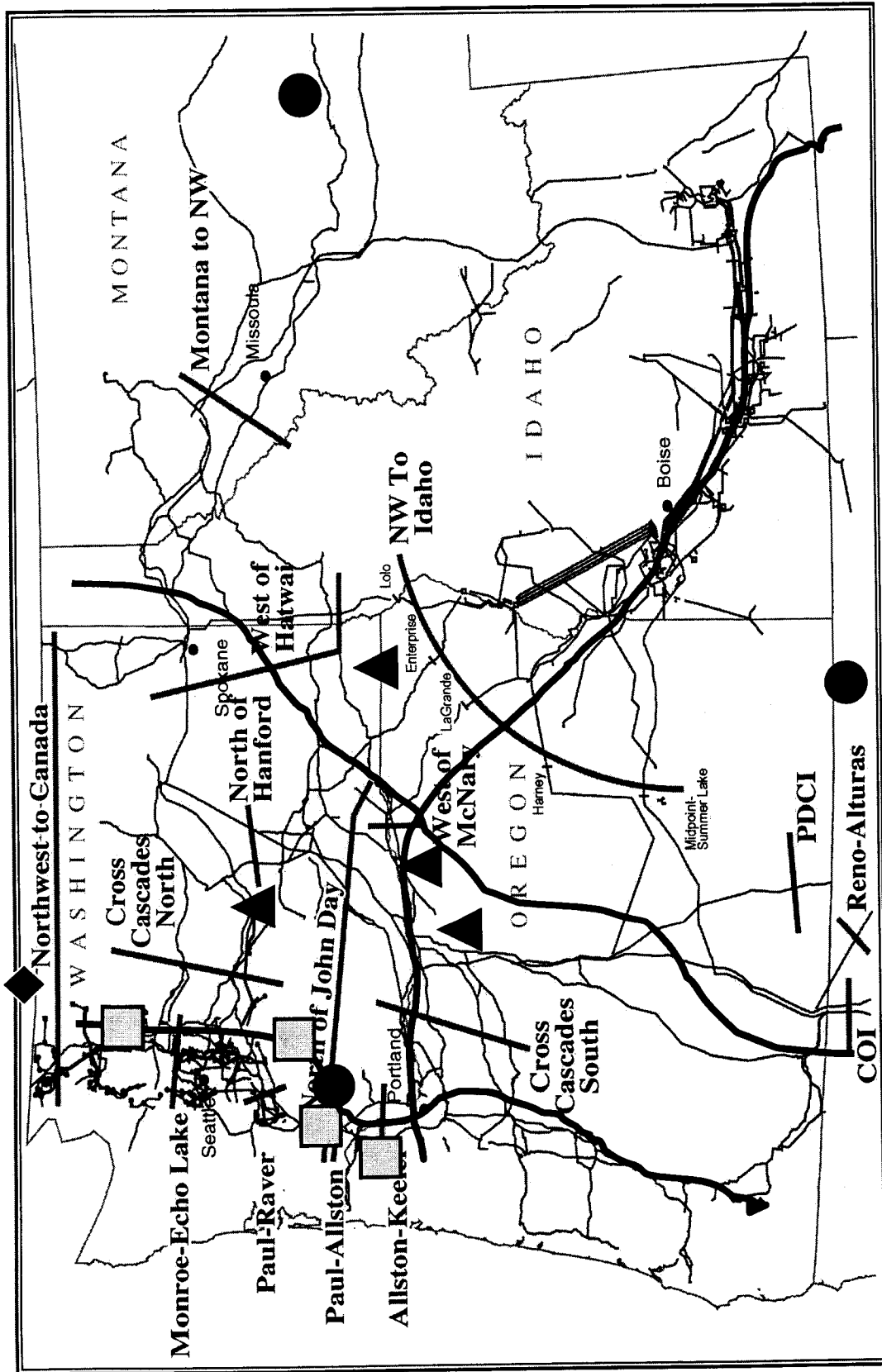
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Acquisition Issues

- Wind
 - ◆ Transmission constraints
 - ◆ Timely permitting
 - ◆ Production Tax Credits
- PPAs
 - ◆ Credit requirements/Counterparty risk
 - ◆ Rate-making for recovery of imputed debt costs
 - ◆ No earnings support
 - ◆ Few long-term, fixed cost choices
- Coal
 - ◆ Low cost fuel (\$0.60-0.80/MMBtu)/Stable revenue requirement
 - ◆ Capital intensive/Transmission constraints
 - ◆ Long permitting and construction schedule
 - ◆ Partnering/Consortium building
 - ◆ Environmental tax risk and sharing mechanisms
- Gas
 - ◆ High cost of fuel (\$5/MMBtu) and volatile
 - ◆ Summer heat rate risk
 - ◆ Reliability and security
 - ◆ Credit intensive

Transmission Constraints



- Gas
- ▲ Wind
- Coal
- ◆ BC IPPs