EXHIBIT NO. \_\_\_(DEM-5C)
DOCKET NO. UE-06\_\_/UG-06\_\_
2006 PSE GENERAL RATE CASE
WITNESS: DAVID E. MILLS

## BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION,	Docket No. UE-06 Docket No. UG-06
Complainant,	
<b>v.</b>	
PUGET SOUND ENERGY, INC.,	
Respondent.	

FOURTH EXHIBIT (CONFIDENTIAL) TO THE PREFILED DIRECT TESTIMONY OF DAVID E. MILLS ON BEHALF OF PUGET SOUND ENERGY, INC.

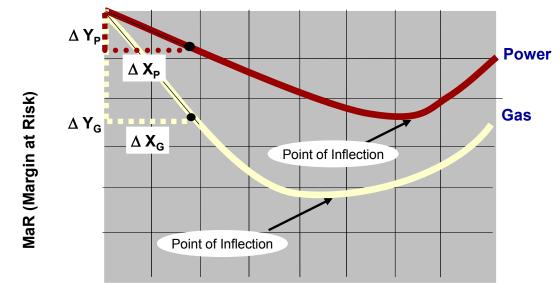
REDACTED VERSION

**FEBRUARY 15, 2006** 

## Margin at Risk And Forward Hedging

## **Current Basis for Hedging Decisions**

- Probabilistic Position
  - Volumetric forecast of load resource, given energy market volatility, resource outages and hydrological forecasts.
- Exposure Report
  - Captures portfolio exposure to spot market price fluctuations.
- Fundamental market views
- Marginal MaR Ratio
  - Measures risk reduction as a result of incremental hedging.
  - Ratio allows for comparative assessment of different commodity hedges.
    - Identifies best commodity and month for hedge transactions.
    - Useful tool to allocate credit.

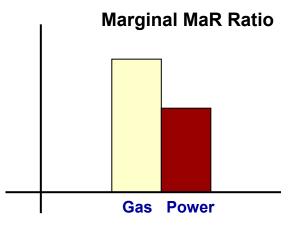


For illustration purposes only

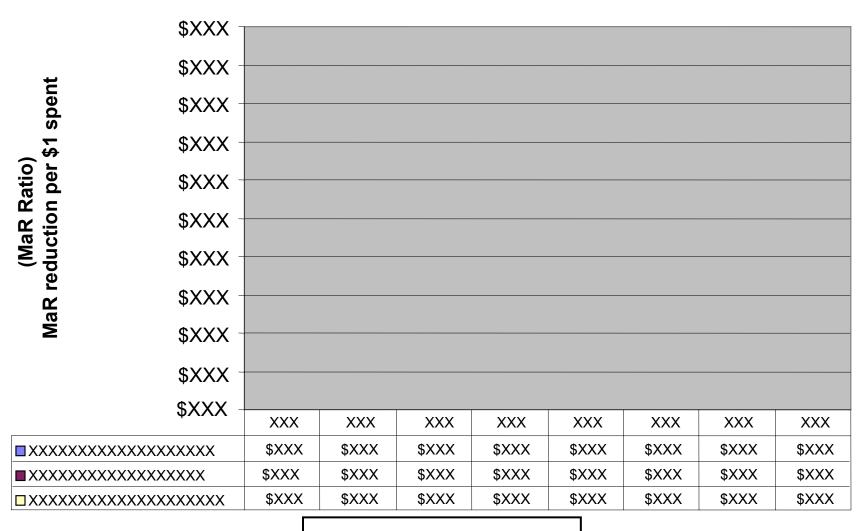
**Hedging \$ Spent** 

Marginal MaR Ratio = 
$$\frac{\text{Change in MaR } (\Delta Y)}{\text{Hedging $ Spent } (\Delta x)}$$

Marginal MaR Ratio approximates the the amount of portfolio risk removed for each hedging dollar spent.



## Marginal MaR Ratio (Week Of 4/19/04)



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