Natural Gas Efficiency:
The New Low-Hanging Fruit

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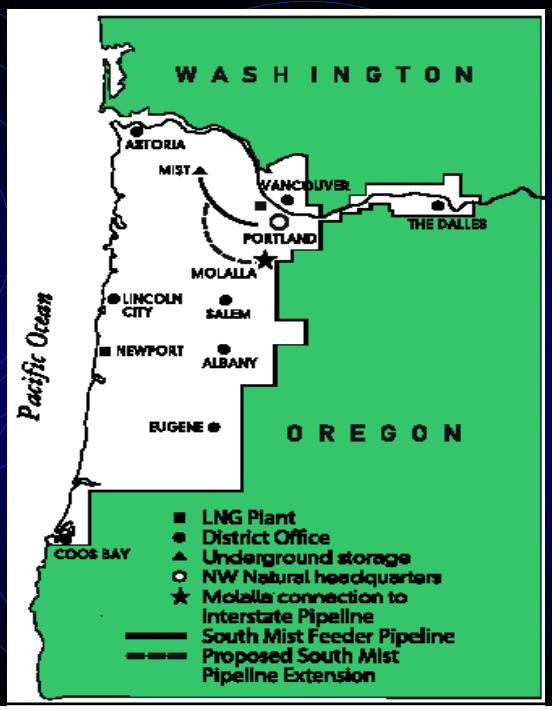
About NW Natural

- Founded 1858 (old for the PWN!)
- Serves Western Oregon / SW Washington
- Over 540,000 customers
- $.65 Billion Operating Revenue
- NYSE: NWN
- Acquiring PGE from Enron

NWN Service Area Covers Population Centers in Oregon



The New Low-Hanging Fruit

Load	Natural Gas (Quad Btus)	Electricity (Quad Btus)
All Residential	**5.14**	**4.07**
Space Heating	3.44	.42
Water Heating	1.32	.41
All Commercial	**3.36**	**3.9**
Space Heating	4.5	.15
Water Heating	.65	.15
All Industrial	**9.79**	**3.65**

EIA, Annual Energy Outlook 2002

Disparity in Avoided Cost of Fuels

(NPV per kWh)

Elect Equipment	Elec ($)	Ratio (x:1)	Gas ($)	Gas Equipment
Zonal Space Heat 30 yr /100% Effcy	.89	2.14	.41	Gas Furnace 30 yr /100% Effcy
Ducted Space Heat 30 yr/25% duct loss	1.19	2.86	.41	Ducted Space Heat 30 yr/ 80% AFUE 25% duct loss
Elect Water Heat 15 yr / EF .90	.67	3.93	.17	Gas Water Heat 15 yr / EF .59

Precipitating Cause: Energy Market Volatility

- 9% rate & gas cost increase in 1999
- 20% gas cost increase in 2000
- 22% gas cost increase in 2001
- Forecasts vary, but not all problems affecting energy crises have been solved

Impacts on Customers

- 55% Increase in use of GAP funds
- CAP Agencies out of funds in January
- Energy Audit demand more than doubles
- Bill Payment Delinquencies

NW Natural's Proposal

Two Parts:

- 1 1/3% Voluntary Public Purpose Funding
- Distribution Margin Normalization (DMN) (or Decoupling)

DMN Objectives

- Eliminates contentiousness in determining "normal weather" in rate cases
- Eliminates effect of volatility in utility earnings and customer energy cost due to:
  - Weather
  - Program induced EE
  - Naturally occurring EE
- **Aligns interests of utility with customers'**

DMN Calculation

- Capture distribution margin for residential and commercial customers on system in test year of last rate case (industrial excluded)
- Compare use per customer in rate case to new use per customer
- Variance x customers in test year x margin
- Result booked to deferred account for amortization and absorbed in rates (+/-)

Effect of DMN on Rates
(High Elasticity Case)
Avoided Cost (NPV per kWh)

Given Δ WACOG:	$.18064	($.02561)
Weather (20 Yr Extremes)	Effect Next Season	Long-Term Effect
Colder	($.005)	($.025)
Normal	$.041	$.021
Warmer	$.079	$.058

Effect of DMN on Rates
(Low Elasticity Case)
Avoided Cost (NPV per kWh)

Given Δ WACOG:	$.18064	($.02561)
Weather (20 Yr Extremes)	Effect Next Season	Long-Term Effect
Colder	($.020)	($.031)
Normal	$.024	$.012
Warmer	$.061	$.047

DMN Benefits

- Eliminates Contention in Rate Cases
- Benefits from fuel-switching and load growth flow directly and immediately to customers – not shareholders
- Preserves volumetric conservation price signals to end users

DMN Benefits

Most importantly:

DMN aligns interests of utility with customers'