## **Northwest Natural Gas Company**

Risk Premium Analysis

PUBLIC UTILITY   GAS COMPANY   RESK   BOND YIELD (1)   RETURNS (2)   PREMIUM	M	OODY'S AVERAGE	AUTHORIZED	INDICATED	
1980					
1981 15.62% 15.11% -0.51% 1982 15.33% 15.62% 0.29% 1983 13.31% 15.25% 1.94% 1984 14.03% 15.31% 15.25% 1.986 1984 14.03% 15.31% 12.28% 1986 9.46% 13.46% 4.00% 1987 9.98% 12.74% 2.76% 1988 10.45% 12.85% 2.40% 1989 9.66% 12.88% 3.22% 1990 9.76% 12.67% 2.91% 1991 9.21% 12.46% 3.25% 1992 8.57% 12.01% 3.44% 1993 7.56% 11.35% 3.05% 1994 8.30% 11.35% 3.05% 1995 7.91% 11.43% 3.52% 1996 7.74% 11.19% 3.45% 1997 7.63% 11.29% 3.66% 1998 7.00% 11.51% 4.51% 2000 8.14% 11.39% 3.25% 2001 7.72% 10.95% 3.23% 2002 7.53% 11.03% 3.50% 2003 6.61% 10.99% 4.38% 2004 6.20% 10.59% 10.46% 4.79% 2006 6.08% 10.43% 10.24% 4.33% AVERAGE 9.23% 12.29% 3.05% INTEREST RATE CHANGE COEFFICIENT ADUSTMENT TO AVG RISK PREMIUM 1.25% BASIC RISK PREMIUM 3.05% INTEREST RATE ADJUSTMENT EQUITY RISK PREMIUM 4.30% INTEREST RATE ADJUSTMENT EQUITY RISK PREMIUM 3.05% INTEREST RATE ADJUSTMENT EQUITY RISK PREMIUM 4.30% INTEREST RATE ADJUSTMENT 5.2000 1.25% PROJECTED SINGLE-A UTILITY BOND YIELD* 6.30% INTEREST RATE ADJUSTMENT 5.25% EQUITY RISK PREMIUM 3.05% INTEREST RATE ADJUSTMENT 5.25% EQUITY RISK PREMIUM 4.30% PROJECTED SINGLE-A UTILITY BOND YIELD* 6.30% INTEREST RATE ADJUSTMENT 5.25% EQUITY RISK PREMIUM 4.30% INTEREST RATE ADJUSTMENT 5.25% EQUITY RISK PREMIUM 4.30% EQUITY RISK PREMIUM 4.30% EQUITY RISK PREMIUM 5.25% EQUITY RISK PREMIUM 5.25% EQUITY RISK PREMIUM 4.30% EQUITY RISK PREMIUM 4.30% EQUITY RISK PREMIUM 5.25% EQUITY RISK PREMIUM 5.30% EQUI	4000				
1982 15.33% 15.62% 0.29% 1983 13.31% 15.25% 1.94% 1984 14.03% 15.31% 12.28% 1985 12.29% 14.75% 2.46% 1986 9.46% 13.46% 4.00% 1987 9.98% 12.74% 2.76% 1988 10.45% 12.85% 2.40% 1989 9.66% 12.88% 3.22% 1990 9.76% 12.67% 2.91% 1991 9.21% 12.46% 3.25% 1992 8.57% 12.01% 3.44% 1993 7.56% 11.35% 3.79% 1994 8.30% 11.35% 3.05% 1995 7.91% 11.43% 3.52% 1996 7.74% 11.19% 3.45% 1997 7.63% 11.29% 3.66% 1998 7.00% 11.51% 4.51% 1999 7.55% 10.66% 3.11% 2000 8.14% 11.39% 3.25% 2001 7.72% 10.95% 3.23% 2002 7.53% 11.03% 3.50% 2003 6.61% 10.99% 4.33% 2004 6.20% 10.59% 4.39% 2005 5.67% 10.46% 4.79% 2006 6.08% 10.43% 4.35% 2007 6.11% 10.24% 4.13% AVERAGE 9.23% 12.29% 3.05%  INTEREST RATE CHANGE COEFFICIENT 4.269% ADUSTMENT TO AVG RISK PREMIUM  INTEREST RATE CHANGE COEFFICIENT 4.269% ADUSTMENT TO AVG RISK PREMIUM  INTEREST RATE CHANGE COEFFICIENT 4.269% ADUSTMENT TO AVG RISK PREMIUM  INTEREST RATE ADJUSTMENT 4.26%  BASIC RISK PREMIUM INTEREST RATE ADJUSTMENT 5.20%  PROJECTED SINGLE-A UTILITY BOND YIELD*  BASIC RISK PREMIUM INTEREST RATE ADJUSTMENT 5.25%  EQUITY RISK PREMIUM INTEREST RATE ADJUSTMENT 5.25%  EQUITY RISK PREMIUM INTEREST RATE ADJUSTMENT 5.25%  EQUITY RISK PREMIUM 5.30%					
1983 13.31% 15.25% 1.94% 1984 14.03% 15.31% 1.28% 2.46% 1985 12.29% 14.75% 2.46% 1986 9.46% 13.46% 4.00% 1987 9.98% 12.74% 2.76% 1988 10.45% 12.85% 2.40% 1989 9.66% 12.88% 3.22% 1990 9.76% 12.67% 2.91% 1991 9.21% 12.46% 3.25% 1992 8.57% 12.01% 3.44% 1993 7.56% 11.35% 3.05% 1995 7.91% 11.43% 3.52% 1996 7.74% 11.19% 3.45% 1997 7.63% 11.29% 3.66% 1998 7.00% 11.51% 4.51% 1999 7.55% 10.66% 3.11% 2000 8.14% 11.39% 3.25% 2001 7.72% 10.95% 2001 7.72% 10.95% 2002 7.53% 11.03% 3.25% 2002 7.53% 11.03% 3.50% 2003 6.61% 10.99% 4.38% 2004 6.20% 10.59% 4.39% 2005 5.67% 10.46% 4.79% 2006 6.08% 10.43% 4.35% 2007 6.11% 10.43% 4.35% 2007 6.11% 10.42% 4.13% AVERAGE 9.23% 12.29% 3.05% INTEREST RATE CHANGE COEFFICIENT ADUSTMENT TO AVG RISK PREMIUM 3.05% INTEREST RATE CHANGE COEFFICIENT ADUSTMENT TO AVG RISK PREMIUM 3.05% INTEREST RATE ADJUSTMENT 5.25% EQUITY RISK PREMIUM 3.05% INTEREST RATE ADJUSTMENT 5.200 5.30% PROJECTED SINGLE-A UTILITY BOND YIELD* 6.30% INTEREST RATE ADJUSTMENT 5.25% EQUITY RISK PREMIUM 3.05% INTEREST RATE ADJUSTMENT 5.25% EQUITY RISK PREMIUM 4.30% 4.30% INTEREST RATE ADJUSTMENT 5.25% EQUITY RISK PREMIUM 4.30% 4.30% EQUITY RISK PREMIUM 4.30% EQUITY RISK P					
1984       14.03%       15.31%       1.28%         1985       12.29%       14.75%       2.46%         1986       9.46%       13.46%       4.00%         1987       9.98%       12.74%       2.76%         1988       10.45%       12.85%       2.40%         1989       9.66%       12.88%       3.22%         1990       9.76%       12.67%       2.91%         1991       9.21%       12.46%       3.25%         1992       8.57%       12.01%       3.44%         1993       7.56%       11.35%       3.79%         1994       8.30%       11.35%       3.05%         1995       7.91%       11.43%       3.52%         1996       7.74%       11.19%       3.45%         1997       7.63%       11.29%       3.66%         1998       7.00%       11.51%       4.51%         1999       7.55%       10.66%       3.11%         2000       8.14%       11.39%       3.25%         2001       7.72%       10.95%       3.23%         2002       7.53%       11.03%       3.50%         2004       6.20%       10.59%					
1985       12.29%       14.75%       2.46%         1986       9.46%       13.46%       4.00%         1987       9.98%       12.74%       2.76%         1988       10.45%       12.85%       2.40%         1989       9.66%       12.88%       3.22%         1990       9.76%       12.67%       2.91%         1991       9.21%       12.46%       3.25%         1992       8.57%       12.01%       3.44%         1993       7.56%       11.35%       3.79%         1994       8.30%       11.35%       3.05%         1995       7.91%       11.43%       3.52%         1996       7.74%       11.19%       3.66%         1997       7.63%       11.29%       3.66%         1998       7.00%       11.51%       4.51%         1999       7.55%       10.66%       3.11%         2000       8.14%       11.39%       3.25%         2001       7.72%       10.95%       3.23%         2002       7.53%       11.03%       3.50%         2003       6.61%       10.99%       4.38%         2004       6.20%       10.59%					
1986 9.46% 13.46% 4.00% 1987 9.98% 12.74% 2.76% 1988 10.45% 12.85% 2.40% 1989 9.66% 12.88% 3.22% 1990 9.76% 12.67% 2.91% 1991 9.21% 12.46% 3.25% 1992 8.57% 12.01% 3.44% 1993 7.56% 11.35% 3.05% 1994 8.30% 11.35% 3.05% 1995 7.91% 11.43% 3.52% 1996 7.74% 11.19% 3.45% 1997 7.63% 11.29% 3.66% 1998 7.00% 11.51% 4.51% 1999 7.55% 10.66% 3.11% 2000 8.14% 11.39% 3.25% 2001 7.72% 10.95% 3.23% 2002 7.53% 11.03% 3.50% 2003 6.61% 10.99% 4.38% 2004 6.20% 10.59% 4.38% 2006 6.08% 10.43% 4.35% 2007 6.11% 10.24% 4.13% AVERAGE 9.23% 12.29% 3.05% INTEREST RATE CHANGE COEFFICIENT ADUSTMENT TO AVG RISK PREMIUM 3.05% INTEREST RATE CHANGE COEFFICIENT ADUSTMENT TO AVG RISK PREMIUM 3.05% INTEREST RATE CHANGE COEFFICIENT ADUSTMENT TO AVG RISK PREMIUM 3.05% INTEREST RATE ADJUSTMENT 5.20% 1.25% EQUITY RISK PREMIUM 3.05% INTEREST RATE ADJUSTMENT 5.20% 5.30% INTEREST RATE ADJUSTMENT 5.25% EQUITY RISK PREMIUM 3.05% INTEREST RATE ADJUSTMENT 5.25% EQUITY RISK PREMIUM 4.30% PROJECTED SINGLE-A UTILITY BOND YIELD* 6.30% INTEREST RATE ADJUSTMENT 5.25% EQUITY RISK PREMIUM 4.30% PROJECTED SINGLE-A UTILITY BOND YIELD* 6.30% INTEREST RATE ADJUSTMENT 5.25% EQUITY RISK PREMIUM 4.30% INTEREST RATE ADJUSTMENT 5.25% EQUITY RISK PREMIUM 4.30% INTEREST RATE ADJUSTMENT 5.25% EQUITY RISK PREMIUM 5.30%					
1987         9.98%         12.74%         2.76%           1988         10.45%         12.85%         2.40%           1989         9.66%         12.88%         3.22%           1990         9.76%         12.67%         2.91%           1991         9.21%         12.46%         3.25%           1992         8.57%         12.01%         3.44%           1993         7.56%         11.35%         3.79%           1994         8.30%         11.35%         3.05%           1995         7.91%         11.43%         3.52%           1996         7.74%         11.19%         3.45%           1997         7.63%         11.29%         3.66%           1998         7.00%         11.51%         4.51%           1999         7.55%         10.66%         3.11%           2000         8.14%         11.39%         3.25%           2001         7.72%         10.95%         3.23%           2002         7.53%         11.03%         3.50%           2003         6.61%         10.99%         4.38%           2004         6.20%         10.59%         4.39%           2005         5.					
1988       10.45%       12.85%       2.40%         1989       9.66%       12.88%       3.22%         1990       9.76%       12.67%       2.91%         1991       9.21%       12.46%       3.25%         1992       8.57%       12.01%       3.44%         1993       7.56%       11.35%       3.79%         1994       8.30%       11.35%       3.05%         1995       7.91%       11.43%       3.52%         1996       7.74%       11.19%       3.45%         1997       7.63%       11.29%       3.66%         1998       7.00%       11.51%       4.51%         1999       7.55%       10.66%       3.11%         2000       8.14%       11.39%       3.25%         2001       7.72%       10.95%       3.23%         2002       7.53%       11.03%       3.50%         2003       6.61%       10.99%       4.38%         2004       6.20%       10.59%       4.39%         2005       5.67%       10.46%       4.79%         2006       6.08%       10.43%       4.35%         2007       6.11%       10.24%					
1989       9.66%       12.88%       3.22%         1990       9.76%       12.67%       2.91%         1991       9.21%       12.46%       3.25%         1992       8.57%       12.01%       3.44%         1993       7.56%       11.35%       3.79%         1994       8.30%       11.35%       3.05%         1995       7.91%       11.43%       3.52%         1996       7.74%       11.19%       3.45%         1997       7.63%       11.29%       3.66%         1998       7.00%       11.51%       4.51%         2000       8.14%       11.39%       3.25%         2001       7.72%       10.95%       3.23%         2002       7.53%       11.03%       3.50%         2003       6.61%       10.99%       4.38%         2004       6.20%       10.59%       4.38%         2005       5.67%       10.46%       4.79%         2006       6.08%       10.43%       4.35%         2007       6.11%       10.24%       4.13%         AVERAGE       9.23%       12.29%       3.05%         INTEREST RATE CHANGE COEFFICIENT					
1990       9.76%       12.67%       2.91%         1991       9.21%       12.46%       3.25%         1992       8.57%       12.01%       3.44%         1993       7.56%       11.35%       3.05%         1994       8.30%       11.35%       3.05%         1995       7.91%       11.43%       3.52%         1996       7.74%       11.19%       3.45%         1997       7.63%       11.29%       3.66%         1998       7.00%       11.51%       4.51%         2000       8.14%       11.39%       3.25%         2001       7.72%       10.95%       3.23%         2002       7.53%       11.03%       3.50%         2001       7.72%       10.95%       3.23%         2002       7.53%       11.03%       3.50%         2003       6.61%       10.99%       4.38%         2004       6.20%       10.59%       4.39%         2005       5.67%       10.46%       4.79%         2006       6.08%       10.43%       4.35%         2007       6.11%       10.24%       4.13%         MODDY'S AVG ANNUAL YIELD DURING STUDY       9.23					
1991       9.21%       12.46%       3.25%         1992       8.57%       12.01%       3.44%         1993       7.56%       11.35%       3.79%         1994       8.30%       11.35%       3.05%         1995       7.91%       11.43%       3.52%         1996       7.74%       11.19%       3.45%         1997       7.63%       11.29%       3.66%         1998       7.00%       11.51%       4.51%         1999       7.55%       10.66%       3.11%         2000       8.14%       11.39%       3.25%         2001       7.72%       10.95%       3.23%         2002       7.53%       11.03%       3.50%         2003       6.61%       10.99%       4.38%         2004       6.20%       10.59%       4.39%         2005       5.67%       10.46%       4.79%         2006       6.08%       10.43%       4.35%         2007       6.11%       10.24%       4.13%         INDICATED COST OF EQUITY         PROJECTED SINGLE-A UTILITY BOND YIELD*       6.30%         INTEREST RATE CHANGE COEFFICIENT       -2.93%         INTEREST R					
1992       8.57%       12.01%       3.44%         1993       7.56%       11.35%       3.79%         1994       8.30%       11.35%       3.05%         1995       7.91%       11.43%       3.52%         1996       7.74%       11.19%       3.45%         1997       7.63%       11.29%       3.66%         1998       7.00%       11.51%       4.51%         1999       7.55%       10.66%       3.11%         2000       8.14%       11.39%       3.25%         2001       7.72%       10.95%       3.23%         2002       7.53%       11.03%       3.50%         2003       6.61%       10.99%       4.38%         2004       6.20%       10.59%       4.39%         2005       5.67%       10.46%       4.79%         2006       6.08%       10.43%       4.35%         2007       6.11%       10.24%       4.13%         AVERAGE       9.23%       12.29%       3.05%         INTEREST RATE CHANGE COEFFICIENT       -2.93%         INTEREST RATE CHANGE COEFFICIENT       -2.69%         ABSIC RISK PREMIUM       1.25%         <					
1993       7.56%       11.35%       3.79%         1994       8.30%       11.35%       3.05%         1995       7.91%       11.43%       3.52%         1996       7.74%       11.19%       3.45%         1997       7.63%       11.29%       3.66%         1998       7.00%       11.51%       4.51%         1999       7.55%       10.66%       3.11%         2000       8.14%       11.39%       3.25%         2001       7.72%       10.95%       3.23%         2002       7.53%       11.03%       3.50%         2003       6.61%       10.99%       4.38%         2004       6.20%       10.59%       4.39%         2005       5.67%       10.46%       4.79%         2006       6.08%       10.43%       4.35%         2007       6.11%       10.24%       4.13%         AVERAGE       9.23%       12.29%       3.05%         INDICATED COST OF EQUITY         PROJECTED SINGLE-A UTILITY BOND YIELD*       42.69%         BASIC RISK PREMIUM       1.25%         BASIC RISK PREMIUM       3.05%         INTEREST RATE ADJUSTMENT       1.25%					
1994       8.30%       11.35%       3.05%         1995       7.91%       11.43%       3.52%         1996       7.74%       11.19%       3.45%         1997       7.63%       11.29%       3.66%         1998       7.00%       11.51%       4.51%         1999       7.55%       10.66%       3.11%         2000       8.14%       11.39%       3.25%         2001       7.72%       10.95%       3.23%         2002       7.53%       11.03%       3.50%         2003       6.61%       10.99%       4.38%         2004       6.20%       10.59%       4.39%         2005       5.67%       10.46%       4.79%         2006       6.08%       10.43%       4.35%         2007       6.11%       10.24%       4.13%         INDICATED COST OF EQUITY         PROJECTED SINGLE-A UTILITY BOND YIELD*       6.30%         MOODY'S AVG ANNUAL YIELD DURING STUDY       9.23%         INTEREST RATE CHANGE COEFFICIENT       -2.93%         ADUSTMENT TO AVG RISK PREMIUM       1.25%         BASIC RISK PREMIUM       3.05%         INTEREST RATE ADJUSTMENT       1.25% <t< td=""><td></td><td></td><td></td><td></td></t<>					
1995       7.91%       11.43%       3.52%         1996       7.74%       11.19%       3.45%         1997       7.63%       11.29%       3.66%         1998       7.00%       11.51%       4.51%         1999       7.55%       10.66%       3.11%         2000       8.14%       11.39%       3.25%         2001       7.72%       10.95%       3.23%         2002       7.53%       11.03%       3.50%         2003       6.61%       10.99%       4.38%         2004       6.20%       10.59%       4.39%         2005       5.67%       10.46%       4.79%         2006       6.08%       10.43%       4.35%         2007       6.11%       10.24%       4.13%         AVERAGE       9.23%       12.29%       3.05%         INDICATED COST OF EQUITY         PROJECTED SINGLE-A UTILITY BOND YIELD*       6.30%         MOODY'S AVG ANNUAL YIELD DURING STUDY       9.23%         INTEREST RATE CHANGE COEFFICIENT       -2.93%         ADUSTMENT TO AVG RISK PREMIUM       1.25%         BASIC RISK PREMIUM       3.05%         INTEREST RATE ADJUSTMENT       1.25%					
1996       7.74%       11.19%       3.45%         1997       7.63%       11.29%       3.66%         1998       7.00%       11.51%       4.51%         1999       7.55%       10.66%       3.11%         2000       8.14%       11.39%       3.25%         2001       7.72%       10.95%       3.23%         2002       7.53%       11.03%       3.50%         2003       6.61%       10.99%       4.38%         2004       6.20%       10.59%       4.39%         2005       5.67%       10.46%       4.79%         2006       6.08%       10.43%       4.35%         2007       6.11%       10.24%       4.13%         AVERAGE       9.23%       12.29%       3.05%         INDICATED COST OF EQUITY         PROJECTED SINGLE-A UTILITY BOND YIELD*       6.30%         MOODY'S AVG ANNUAL YIELD DURING STUDY       9.23%         INTEREST RATE CHANGE COEFFICIENT       -42.69%         ADUSTMENT TO AVG RISK PREMIUM       1.25%         BASIC RISK PREMIUM       3.05%         INTEREST RATE ADJUSTMENT       1.25%         EQUITY RISK PREMIUM       4.30%         PROJECTED S					
1997       7.63%       11.29%       3.66%         1998       7.00%       11.51%       4.51%         1999       7.55%       10.66%       3.11%         2000       8.14%       11.39%       3.25%         2001       7.72%       10.95%       3.23%         2002       7.53%       11.03%       3.50%         2003       6.61%       10.99%       4.38%         2004       6.20%       10.59%       4.39%         2005       5.67%       10.46%       4.79%         2006       6.08%       10.43%       4.35%         2007       6.11%       10.24%       4.13%         AVERAGE       9.23%       12.29%       3.05%         INDICATED COST OF EQUITY         PROJECTED SINGLE-A UTILITY BOND YIELD*       6.30%         MOODY'S AVG ANNUAL YIELD DURING STUDY       9.23%         INTEREST RATE CHANGE COEFFICIENT       -42.69%         ADUSTMENT TO AVG RISK PREMIUM       1.25%         BASIC RISK PREMIUM       3.05%         INTEREST RATE ADJUSTMENT       1.25%         EQUITY RISK PREMIUM       4.30%         PROJECTED SINGLE-A UTILITY BOND YIELD*       6.30%					
1998       7.00%       11.51%       4.51%         1999       7.55%       10.66%       3.11%         2000       8.14%       11.39%       3.25%         2001       7.72%       10.95%       3.23%         2002       7.53%       11.03%       3.50%         2003       6.61%       10.99%       4.38%         2004       6.20%       10.59%       4.39%         2005       5.67%       10.46%       4.79%         2006       6.08%       10.43%       4.35%         2007       6.11%       10.24%       4.13%         AVERAGE       9.23%       12.29%       3.05%         INDICATED COST OF EQUITY         PROJECTED SINGLE-A UTILITY BOND YIELD*       6.30%         MOODY'S AVG ANNUAL YIELD DURING STUDY       9.23%         INTEREST RATE CHANGE COEFFICIENT       -42.69%         ADUSTMENT TO AVG RISK PREMIUM       1.25%         BASIC RISK PREMIUM       3.05%         INTEREST RATE ADJUSTMENT       1.25%         EQUITY RISK PREMIUM       4.30%         PROJECTED SINGLE-A UTILITY BOND YIELD*       6.30%					
1999       7.55%       10.66%       3.11%         2000       8.14%       11.39%       3.25%         2001       7.72%       10.95%       3.23%         2002       7.53%       11.03%       3.50%         2003       6.61%       10.99%       4.38%         2004       6.20%       10.59%       4.39%         2005       5.67%       10.46%       4.79%         2006       6.08%       10.43%       4.35%         2007       6.11%       10.24%       4.13%         AVERAGE       9.23%       12.29%       3.05%         INDICATED COST OF EQUITY         PROJECTED SINGLE-A UTILITY BOND YIELD*       6.30%         MOODY'S AVG ANNUAL YIELD DURING STUDY       9.23%         INTEREST RATE CHANGE COEFFICIENT       -42.69%         ADUSTMENT TO AVG RISK PREMIUM       1.25%         BASIC RISK PREMIUM       3.05%         INTEREST RATE ADJUSTMENT       1.25%         EQUITY RISK PREMIUM       4.30%         PROJECTED SINGLE-A UTILITY BOND YIELD*       6.30%					
2000       8.14%       11.39%       3.25%         2001       7.72%       10.95%       3.23%         2002       7.53%       11.03%       3.50%         2003       6.61%       10.99%       4.38%         2004       6.20%       10.59%       4.39%         2005       5.67%       10.46%       4.79%         2006       6.08%       10.43%       4.35%         2007       6.11%       10.24%       4.13%         AVERAGE       9.23%       12.29%       3.05%         INDICATED COST OF EQUITY         PROJECTED SINGLE-A UTILITY BOND YIELD*       6.30%         MOODY'S AVG ANNUAL YIELD DURING STUDY       9.23%         INTEREST RATE CHANGE COEFFICIENT       -2.93%         INTEREST RATE CHANGE COEFFICIENT       -42.69%         ADUSTMENT TO AVG RISK PREMIUM       1.25%         BASIC RISK PREMIUM       3.05%         INTEREST RATE ADJUSTMENT       1.25%         EQUITY RISK PREMIUM       4.30%         PROJECTED SINGLE-A UTILITY BOND YIELD*       6.30%					
2001       7.72%       10.95%       3.23%         2002       7.53%       11.03%       3.50%         2003       6.61%       10.99%       4.38%         2004       6.20%       10.59%       4.39%         2005       5.67%       10.46%       4.79%         2006       6.08%       10.43%       4.35%         2007       6.11%       10.24%       4.13%         AVERAGE       9.23%       12.29%       3.05%         INDICATED COST OF EQUITY         PROJECTED SINGLE-A UTILITY BOND YIELD*       6.30%         MOODY'S AVG ANNUAL YIELD DURING STUDY       9.23%         INTEREST RATE CHANGE COEFFICIENT       -2.93%         ADUSTMENT TO AVG RISK PREMIUM       1.25%         BASIC RISK PREMIUM       3.05%         INTEREST RATE ADJUSTMENT       1.25%         EQUITY RISK PREMIUM       4.30%         PROJECTED SINGLE-A UTILITY BOND YIELD*       6.30%					
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2003       6.61%       10.99%       4.38%         2004       6.20%       10.59%       4.39%         2005       5.67%       10.46%       4.79%         2006       6.08%       10.43%       4.35%         2007       6.11%       10.24%       4.13%         AVERAGE       9.23%       12.29%       3.05%         INDICATED COST OF EQUITY         PROJECTED SINGLE-A UTILITY BOND YIELD*       6.30%         MOODY'S AVG ANNUAL YIELD DURING STUDY       9.23%         INTEREST RATE DIFFERENCE       -2.93%         INTEREST RATE CHANGE COEFFICIENT       -42.69%         ADUSTMENT TO AVG RISK PREMIUM       1.25%         BASIC RISK PREMIUM       3.05%         INTEREST RATE ADJUSTMENT       1.25%         EQUITY RISK PREMIUM       4.30%         PROJECTED SINGLE-A UTILITY BOND YIELD*       6.30%					
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2006       6.08%       10.43%       4.35%         2007       6.11%       10.24%       4.13%         AVERAGE       9.23%       12.29%       3.05%         INDICATED COST OF EQUITY         PROJECTED SINGLE-A UTILITY BOND YIELD*       6.30%         MOODY'S AVG ANNUAL YIELD DURING STUDY       9.23%         INTEREST RATE DIFFERENCE       -2.93%         INTEREST RATE CHANGE COEFFICIENT       -42.69%         ADUSTMENT TO AVG RISK PREMIUM       1.25%         BASIC RISK PREMIUM       3.05%         INTEREST RATE ADJUSTMENT       1.25%         EQUITY RISK PREMIUM       4.30%         PROJECTED SINGLE-A UTILITY BOND YIELD*       6.30%					
2007         6.11%         10.24%         4.13%           AVERAGE         9.23%         12.29%         3.05%           INDICATED COST OF EQUITY           PROJECTED SINGLE-A UTILITY BOND YIELD*         6.30%           MOODY'S AVG ANNUAL YIELD DURING STUDY         9.23%           INTEREST RATE DIFFERENCE         -2.93%           INTEREST RATE CHANGE COEFFICIENT         -42.69%           ADUSTMENT TO AVG RISK PREMIUM         1.25%           BASIC RISK PREMIUM         3.05%           INTEREST RATE ADJUSTMENT         1.25%           EQUITY RISK PREMIUM         4.30%           PROJECTED SINGLE-A UTILITY BOND YIELD*         6.30%					
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PROJECTED SINGLE-A UTILITY BOND YIELD*  MOODY'S AVG ANNUAL YIELD DURING STUDY  INTEREST RATE DIFFERENCE  INTEREST RATE CHANGE COEFFICIENT  ADUSTMENT TO AVG RISK PREMIUM  BASIC RISK PREMIUM  INTEREST RATE ADJUSTMENT  EQUITY RISK PREMIUM  PROJECTED SINGLE-A UTILITY BOND YIELD*  6.30%					
MOODY'S AVG ANNUAL YIELD DURING STUDY INTEREST RATE DIFFERENCE  -2.93%  INTEREST RATE CHANGE COEFFICIENT -42.69% ADUSTMENT TO AVG RISK PREMIUM  BASIC RISK PREMIUM  3.05% INTEREST RATE ADJUSTMENT EQUITY RISK PREMIUM  4.30%  PROJECTED SINGLE-A UTILITY BOND YIELD*  6.30%					
INTEREST RATE DIFFERENCE -2.93%  INTEREST RATE CHANGE COEFFICIENT ADUSTMENT TO AVG RISK PREMIUM 1.25%  BASIC RISK PREMIUM 3.05% INTEREST RATE ADJUSTMENT EQUITY RISK PREMIUM 4.30%  PROJECTED SINGLE-A UTILITY BOND YIELD* 6.30%					
INTEREST RATE CHANGE COEFFICIENT ADUSTMENT TO AVG RISK PREMIUM 1.25%  BASIC RISK PREMIUM 3.05% INTEREST RATE ADJUSTMENT EQUITY RISK PREMIUM 4.30%  PROJECTED SINGLE-A UTILITY BOND YIELD* 6.30%					
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INTEREST RATE ADJUSTMENT EQUITY RISK PREMIUM  1.25% 4.30%  PROJECTED SINGLE-A UTILITY BOND YIELD*  6.30%	ADUSTMENT	1.25%			
INTEREST RATE ADJUSTMENT EQUITY RISK PREMIUM  1.25% 4.30%  PROJECTED SINGLE-A UTILITY BOND YIELD*  6.30%	BASIC RISK P	REMIUM		3.05%	
PROJECTED SINGLE-A UTILITY BOND YIELD* 6.30%	INTEREST R	ATE ADJUSTMENT		1.25%	
	EQUITY RISH	( PREMIUM		4.30%	
	PROJECTED S	SINGLE-A UTILITY BO	OND YIELD*	6.30%	

## Sources:

<sup>(1)</sup> Moody's Investors Service

<sup>(2)</sup> Regulatory Focus, Regulatory Research Associates, Inc.

<sup>\*</sup>Projected single-A bond yield is 120 basis points over projected 30-year Treasury bond rate of 5.1% from Exhibit No.\_\_\_(SCH-4). The average single-A spread for 2007 was 117 basis points.

## **Northwest Natural Gas Company**

Risk Premium Analysis

