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# Protecting Revenue and Growing Sales in the Oil Heat, Propane & Natural Gas Industries

By WeatherBill, Inc.

## NEW WEATHER COVERAGE SOLUTIONS

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## INTRODUCTION

The heating fuel industry is heavily dependent on two factors that are out of the industry's control: fuel prices and the weather. Fuel prices are determined by the global market price of crude oil and natural gas. Price fluctuation, which affects demand and volume, is completely beyond retailer control and extremely volatile. For example, fuel and gas prices in 2008 fluctuated from more than \$140 a barrel to less than \$50 within just a few months. Highly volatile fuel prices make it extremely difficult to budget and predict for expenses and margin per gallon during the winter. Because of heavy competition and a weak economy, heating fuel dealers cannot increase returns by passing on the price increase in fuel costs to customers.

A recession has put household budgets under tight scrutiny and, as a result, affected the heating fuel industry. Additionally, homeowners are reducing expenses by limiting heating and switching to alternative energy sources, which weakens heating fuel and propane demand nationwide (keep in mind that nearly half of oil heat and propane revenue comes from household use).

Decades ago, price hedging became a successful solution for the heating fuels industry and is a commonplace financial tool to this day. Companies routinely hedge prices – both by buying fuel in advance as well as by selling fuel at fixed prices before the start of the winter season. However, volume hedging has been difficult since it is highly influenced by the weather. Weather coverage changes that fact, allowing heating fuel retailers and wholesalers to protect revenue from weather fluctuations. Now revenue can be more predictable, regardless of volume fluctuations that affect profit margins during warm winters or extreme cold snaps.

Like price fluctuation, the weather was once unmanageable, but today weather coverage can enable heating fuel retailers to protect their revenue by hedging weather. Weather coverage can also help businesses in the industry grow sales.

Although the concept of weather coverage is new in the heating fuel industry, it has been embraced for the last decade in the electricity market. The popularity of weather coverage is growing as businesses face new economic and climate challenges. This paper is written for an audience of oil heat, natural gas, liquefied petroleum, and other fuel retailers whom, through direct sales and deliveries, cater to residential and commercial clients.

The objective of this paper is to provide examples of new ways these retailers can protect revenue and grow sales with weather coverage in an increasing volatile economy and changing climate. It is our hope that this paper will benefit not only the retailers, but the customers that rely on heating fuel and purchase products through businesses that utilize weather coverage.

### (A VERY SHORT) WEATHER COVERAGE HISTORY LESSON

In the 1990's, electric companies began using weather coverage to make their profits more predictable, even when the weather wasn't. These companies found large financial risk takers who, in exchange for a premium, would pay for bad weather. Electric companies wanted to be paid for mild winters when consumers weren't turning up their heat, and cool summers when they weren't turning on their air conditioning. If weather stations in the energy companies' coverage areas indicated that a mild winter had occurred, then the energy companies would be paid and thus meet their profit expectations. If the bad weather didn't happen, the financial risk takers would keep the premium, and the energy companies had the peace of mind that they would meet their profit expectations.

The most common types of weather coverage contracts in the energy industry are Cooling Degree Days (CDD) and Heating Degree Days (HDD). The contracts cover demand for energy, which is mostly driven by temperatures. The number of degree days is the difference between a day's recorded average temperature (average of maximum and minimum temperature) and 65 degrees Fahrenheit - which is considered the temperature at which both heating and cooling demand is minimized. For example, if the average temperature was 55 degrees, there would be 10 Heating Degree Days recorded. If the daily average temperature were 85 degrees for particular date, 20 cooling degree days would be recorded.

HDD coverage can use a fixed payout amount for every Heating Degree Day calculated during a season above, or below, a specified threshold.

*“Pay me \$5,000 for every HDD above 450, as measured at LaGuardia Airport, with a maximum payout of \$1,000,000.”*

While HDD and CDD coverage remains a fixture in the energy industry, the concept of weather coverage is quickly expanding to other weather-sensitive industries in need of profit protection and sales growth. One of the first companies to use this new form of weather coverage was very dependent on seasonal snowfall: Bombardier, a Canadian transportation and recreational equipment giant. During the winter of 1996, Bombardier offered a \$1,000 rebate on its Ski-Doo snowmobiles to Midwestern customers in 16 cities. If the customer's local snowfall was less than half the average of the past three years, they would be refunded \$1,000. That winter, Ski-Doo sales increased 38% compared to the previous year. Customers also purchased snowmobiles months earlier than normal, breaking traditional sales patterns.

Today, weather coverage is utilized by weather-sensitive businesses large and small, including farmers, municipalities, outdoor concerts, professional sports teams, ski resorts, golf tournaments, car washes, and heating fuel retailers. Businesses of any size with a profit risk related to the weather can purchase coverage for any amount – from \$1.00 to millions of dollars. Deductibles are optional and weather coverage can be purchased up to four days before the risk period. Weather coverage provides immediate payment without proof of loss. If the weather happens, you get paid.

#### THE WEATHER IS CHANGING

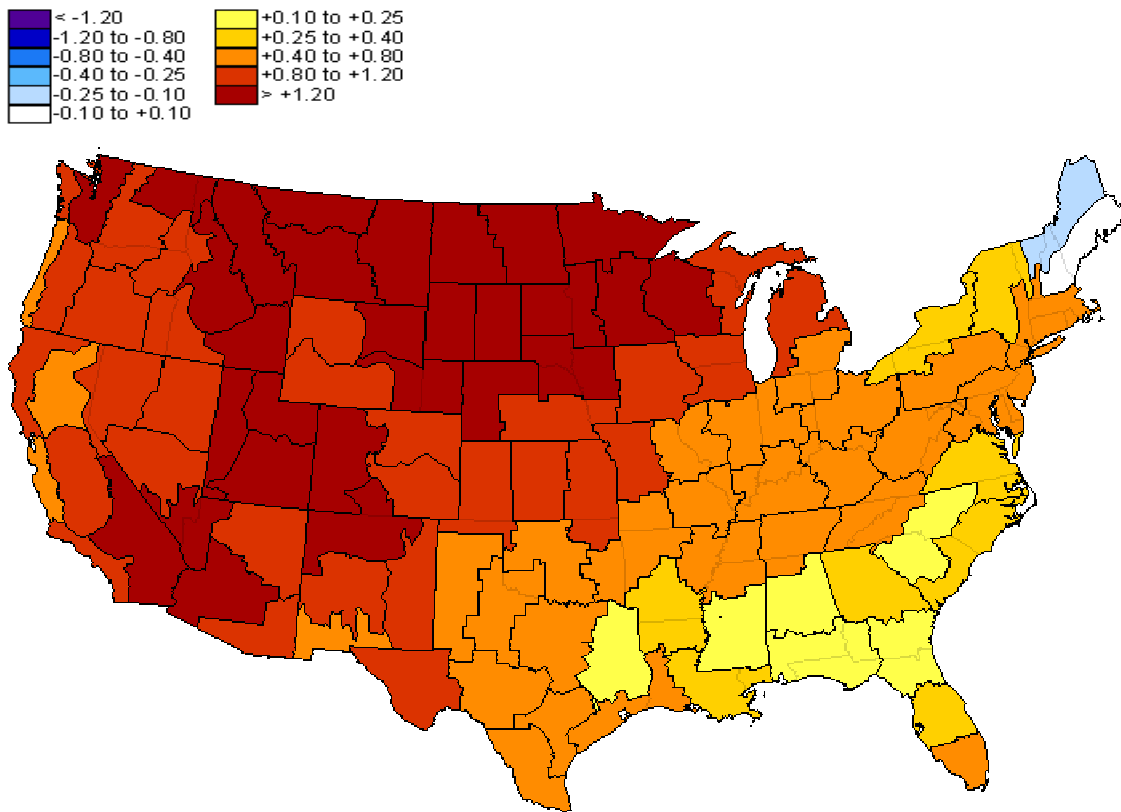
One-third of the United States' economy, or \$3.8 trillion, is at risk due to the weather, according to the U.S. Department of Commerce. Meteorologists in the UK estimate that 80% of global business activity is weather-dependent. Climate is changing and weather is becoming increasingly unpredictable, increasing the need for weather risk management. WeatherBill's research into 30 year U.S. weather trends found:

- 57% of cities are warmer in the winter
- 15% of cities are warmer in the summer

The heating fuels industry needs to actively manage their risk of warming weather trends and seek new tools to grow and protect profits.

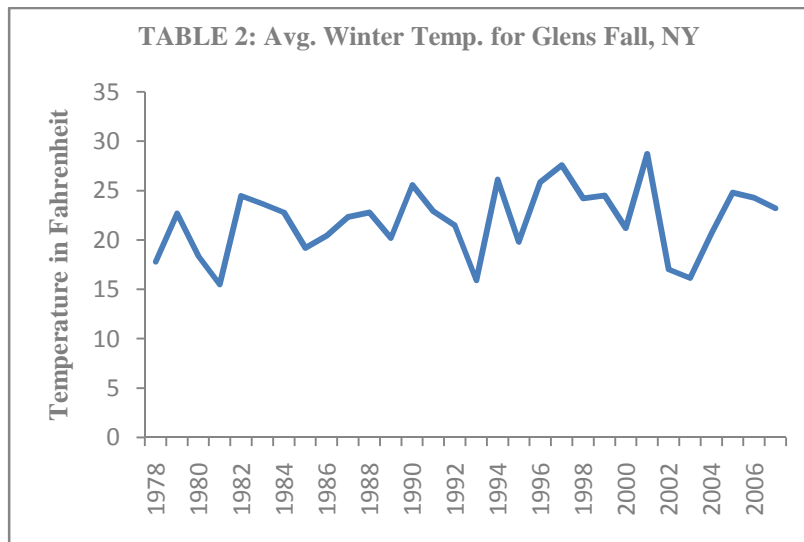
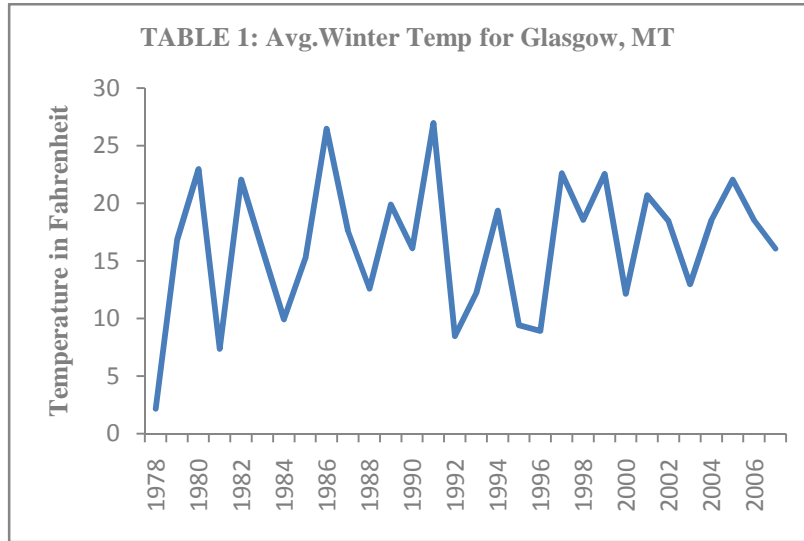
Climate trends in the United States are, for the most part, not favorable for the heating fuel market. Most of the U.S. is getting warmer during the winter months. The warming trend is illustrated in the long-term temperature trend map created by the National Weather Service. The map also indicates that the average winter temperatures are rising nationwide. During the past 30 years, every single state in the U.S., except for Maine, has grown warmer during the winter.

MAP: Thirty Year Temperature Trends in the United States (NWS)



Warming temperatures are important because they have a substantial impact on heating demand, which is highly seasonal. Current warming temperatures threaten to increase the frequency of years with weak demand, putting financial strains on dealers. Winters that start late and end earlier than anticipated can also be costly to heating fuel retailers. During extremely cold winters in the United States when fuel prices spike, government subsidies can increase demand (residential sales are the largest market for heating fuel, about 46% of revenue).

Winters may be warming, but winter temperatures remain unpredictable year over year, making it difficult to anticipate demand and purchase the appropriate quantities of fuel at less expensive advance prices. The following two tables represent average winter temperatures over the past thirty years for cities in Montana and New York.



## WEATHER COVERAGE SOLUTIONS

Weather coverage can help grow and protect heating fuel profit in three ways:

1. Stabilize volume and income
2. Control costs
3. Acquire and retain customers

Heating fuel retailers no longer have to leave their revenue to the mercy of bad weather. Weather coverage enables business owners to adapt their strategy and get paid for the weather that historically made revenue unpredictable. In the following pages, we will examine how weather coverage can accomplish these two objectives and include some examples of how coverage works. First we will examine the problems weather coverage can address.

### 1. STABILIZE VOLUME & INCOME

Heating fuel retailers can get paid for warm winters, just as electric utilities have done for more than a decade, locking in revenue with weather coverage that pays when winter temperatures are warmer than expected. This makes revenue predictable and also ensures that it is in sync with costs. Weather coverage also provides peace of mind and enables favorable pricing that attracts new customers and satisfies existing ones.

#### EXAMPLE: Stabilize Volume & Income from Mild Winters

Problem: A heating fuel retailer provides services for residential customers and worries that a warm winter will hurt revenue.

Coverage Type: The heating fuel retailer creates and purchases weather coverage for the November to March season. If the total heating degree days fall below a typical seasonal level, 4500 in this case, the retailer will be paid \$1,000 for every degree day shortfall. If it was a warm winter and the heating degree days only totaled 4200, the coverage would pay out \$300,000 dollars. Cost will depend on where in the country coverage is based, but is typically bought at level equivalent to 5-15% of the maximum potential payout.

#### EXAMPLE: Stabilize Volume & Income during Peak Periods

Problem: A heating fuel retailer provides services for residential customers and worries that a warm spell during a peak period will hurt revenue.

Coverage Type: After a very warm December, a heating fuel retailer creates and purchases weather coverage for the month of January to protect against any further seasonal shortfalls in revenue and profit. The retailer wants to be paid \$500 for every heating degree day below 850 that is accumulated in the month. The retailer can buy this coverage during the last two weeks of December when seasonal profits are already trending lower.

## 2. CONTROL COSTS

The largest cost for the heating fuel industry is fuel purchases. Inventory costs cause the single largest variability in gross margins. Weather coverage can be designed to protect against unexpected cost increases due to the weather, reducing gross margin volatility per gallon sold.

### EXAMPLE: Controlling Costs Seasonally

Problem: A heating fuel retailer is concerned that extremely cold weather will cause a sharp increase in demand and necessitate expensive wholesale spot purchases at any given point during the winter.

Coverage Type: The retailer purchases coverage for the November to March season. The retailer wants to be paid \$100,000 for every consecutive day the temperature falls below 20°F after the first three days. The maximum payout is \$1 million dollars.

This coverage typically costs between 1-5% of the maximum potential payout, depending on location.

## 3. ACQUIRE & RETAIN CUSTOMERS

The heating fuel industry is extremely competitive and the need for new customers is constantly growing. Historically, the industry has taken advantage of traditional forms of differentiation like marketing campaigns, supply reliability, service, and location. Regions with especially tough competition sometimes rely on supply reliability as their only way to differentiate.

Weather coverage can also be used to grow sales in addition to preventing revenue loss. This is done with weather refund promotions. These promotions are an effective way to differentiate from competitors, create customer loyalty and inspire great word of mouth. They are flexible and can be customized to fit any budget or goal. Weather promotions typically cost between one and seven-percent of total coverage.

### EXAMPLES: Attract New Customers with Free Fuel Promotions

Monthly Temperatures: Offer free fuel for January after the first 100 gallons or 200,000 cubic feet of natural gas if the average temperature for the month is less than 20 degrees.

Seasonal Temperatures: If the seasonal average is less than 20 degrees customers receive free fuel or gas after the first 500 gallons or 1 million cubic feet of natural gas.

Remember, every part of this promotion can be customized. You can make the average temperature 10 degrees or 50. You can set the time frame anywhere from a day to six months. This allows you to create a promotion to your exact location, customer base and budget. All of your risk associated with the program is covered by purchasing weather coverage.

Weather refund promotions reduce customer exposure to extreme heating bills by cushioning customer budgets when extremely cold weather hits. They offer customers relief from higher costs, making a powerful impact on your brand and customer loyalty. Customers will sign up and remain loyal due to your ability to reduce customer cost volatility.

#### EXAMPLES: Grow Sales with Weather Refund Promotions

Seasonal Promotion: Offer customers a \$1,000 refund, good towards purchasing future fuel, if the seasonal average temperature is 20% below normal

Monthly Promotion: Offer customers a \$100 refund if the monthly average temperature is 10 degrees below normal.

Daily Promotion: Offer a \$25 refund each day the average temperature in January is 20 degrees or below.

In all cases, weather coverage can be purchased ahead of the season, as supply contracts are signed, to ensure that all of the risk associated with the refund program is hedged.

#### ABOUT WEATHERBILL

Weather contracts have traded on the Chicago Mercantile Exchange (CME) since 1999, but they offer limited customization, require large purchases and are available only in major metropolitan areas like Atlanta and New York City. CME weather coverage fits the needs of large Energy companies quite well, but if you're an independent heating fuels supplier working in more remote areas, these large, standardized contracts can't meet your very specific needs.

Three major obstacles have prevented weather coverage from being utilized by all weather-sensitive businesses. The first obstacle was accessibility. It took a team of attorneys and financial experts to price coverage, create documents, and execute the transaction. Thus, weather coverage was only available to large Fortune 500 businesses. The second obstacle was cost. The customization required to create appropriate weather coverage made it expensive and difficult to price on a small scale. The third obstacle was transparency. Weather data and an understanding of weather's effects on earnings were not well understood, so optimizing coverage was difficult.

WeatherBill removed these three obstacles by creating the first online platform available to all businesses, including those in the heating fuels industry. Customers can customize, price, and purchase coverage online or by phone in a matter of minutes at [www.weatherbill.com](http://www.weatherbill.com). By streamlining customization and pricing, WeatherBill can cost-effectively provide coverage from \$1.00 to millions of dollars. WeatherBill also provides historic payout charts so customers can find the best value for the best price, and buy the coverage that would have covered past losses most effectively.

WeatherBill coverage can be created for snow and rain, drought, heat or cold. Coverage is easily customized based on four elements outlined in a weather contract:

Location – Over 6,000 weather stations in seven countries (more locations available by phone)

Coverage Period – Hourly, day, weekend, season, year, etc.

Type of Weather that Triggers Payment – Rain, drought, heat, cold, snow

Payout Amount - \$1 to \$100 million or more

Unlike insurance, WeatherBill payout is based on weather measurements, not human assessment of loss. Once the defined weather happens, customers automatically receive a check for the payout amount in a few business days. There's no proof of loss, claims process, or waiting for payment. Deductibles are optional. Coverage can be created online or over the phone in a matter of minutes and implemented four days before the desired coverage period.

WeatherBill's financial risk partner, Nephila Capital Ltd., is one of the world's largest and most respected weather risk and catastrophe reinsurance fund managers, with over \$2 billion in capital. In order to make sure that any payment due to our clients is available, in full, at any time, Nephila fully collateralizes each contract WeatherBill sells with cash held in trust at the Bank of New York.

## CONCLUSION

Weather coverage has come a long way since its inception in the energy industry. New economic and climate challenges are increasing the need for new financial solutions. Businesses and their customers can no longer afford to be at the mercy of the weather. As the availability and affordability of weather coverage expands, the use of weather coverage is growing in all weather-sensitive industries, including heating fuel. WeatherBill is making that possible.

Weather coverage enables business owners to adapt their strategy and get paid for the weather that historically made revenue unpredictable. Weather coverage can help grow and protect profit.

Weather coverage guarantees profit by paying businesses for unusual seasonal temperature deviations and covering costs associated with short-term temperature swings. Weather coverage can help grow business by offering customers refunds and weather promotion add-ons. Making revenue predictable as well as ensuring that it is in sync with costs provides peace of mind and enables favorable pricing that attracts new customers and satisfies existing ones.

With WeatherBill, weather coverage can be created online or over the phone for snow and rain, drought, heat or cold. Coverage is easily customized based on location, coverage period, the type of weather that triggers payment (rain drought, heat, cold, snow, frost), and payout amount. WeatherBill is different from insurance because payout is based on weather, not human assessment. There's no proof of loss, claims process, or waiting for payment.

Weather is unpredictable. Heating fuel revenue no longer has to be.

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