

Weather Futures Example

Customer A has a monthly energy bill of \$500,000. Customer A is worried that the coming winter could be severe and that its energy bill might jump substantially. Customer A's research shows that a 1% increase in HDD results in a 2% increase in its energy bill.

Customer A could buy weather futures to mitigate this risk.

Example

Customer A buys Chicago HDD Index January 2000 valued at 1,250.

A 1% increase in HDD would be worth \$1,250.

A 2% increase in the Customer A's energy bill would cost an additional \$10,000
($\$500,000 \times .02 = \$10,000$)

Thus, Customer A would need to buy 8 contracts
($\$10,000/\$1,250 = 8$)

Say the winter is severe and the HDD contract settles at 1,500.
This would result in a profit of \$25,000 per contract or a total profit of \$200,000
($1,500 - 1,250) \times \$100 \times 8 = \$200,000$)

The 250 HDD increase represents an increase of 20% which, if Customer A's research is correct, would result in a 40% increase in Customer A's energy bill. This would be an increase in its energy bill of \$200,000 ($\$500,000 \times .40 = \$200,000$) that would be offset by its gains on the weather futures.