



# How to Use ezHedge

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## Overview

Kase ezHedge is a volume-averaging hedge program for energy consumers. The program breaks market prices into five zones and evaluates when to hedge based on cycle analysis and the market's status relative to the underlying cycle and price zone. The program's default is to hedge 18 months forward, but alternative six- and twelve-month programs are available.

The upper and lower zones are no-hedge zones, while the middle three zones allow for hedging. Each day is plotted as a colored dot on the day's closing price. The color of the dot tells the hedger what to do. It's as simple as that, "ez".

### Five Price Zones

Upper Zone
Zone 1
Zone 2
Zone 3
Lower Zone

## Four Basic Principles

Kase ezHedge is based on cycle analysis and relates to four basic principles. Two of these do not and two do allow hedging to take place. These are:

### Hedging Not Allowed Principles

1. After a market rises for a very long time, the odds are that the market will peak soon, and then turn to the downside. In this case hedging is no longer allowed.
2. If the market falls for a certain number of days, and prices are statistically low, odds are that prices will continue to fall, becoming more favorable. In this case hedging is no longer allowed.

### Hedging Allowed Principles

3. After a market has reached a low point and rises for a certain period of time, odds are that it will continue to rise, hedging is allowed.

4. After a rising market has failed to turn lower, that is, if Principle 1 fails, and the market swings back up, hedging is allowed.

The time periods involved with the cycles have been determined by computer optimization. For details on the optimization process and backtest results please contact the Kase Call Center at (505) 237-1600 or write to [kase@kaseco.com](mailto:kase@kaseco.com).

### **The Zones**

As shown on the first page, the model breaks market prices into five zones, an upper and lower zone and three middle zones.

#### **Middle Zones 1, 2 and 3**

Depending on the color of the dot, marking its respective day, hedging may be called for in any of the three middle zones. In each zone “points” may be accumulated and when there are enough points for the hedger to execute at sufficient volume a hedge may be placed. Each day in which hedging is allowed, Zone 1 accumulates one point, Zone 2, two points and Zone 3, three points. Each point corresponds to a certain percentage of hedge volume.

#### **Upper and Lower Zones**

In the upper and lower zones no hedges are placed. In the highest zone, prices may be too high to justify hedging. In the lowest zone, prices are so low they may signal a possible perpetuation to the downside.

### **Dot Colors**

ezHedge uses four dot colors. If dots are red or gray, no points are accumulated and no hedges are placed. If the dot is red any prior accumulation is reset to zero. If the dot is gray any prior accumulation is held at the level it had been before gray. If dots are light blue, nothing is hedged, but the accumulation count is allowed to build. If dots are blue, all previously accumulated volumes, including the volume for the current day is hedged as soon as possible.

Dot Color	Accumulate	Reset to Zero	Hedge
Red	No	Yes	No
Gray	No	No	No
Lt. Blue	Yes	No	No
Blue	Yes	No	Yes

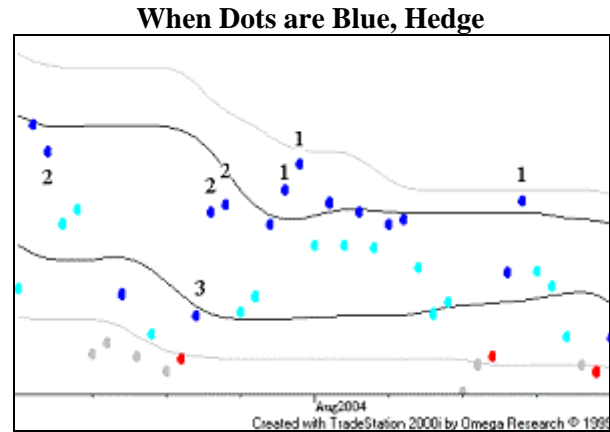
### **Rules for Using ezHedge**

1. Count one point for Zone 1, two points for Zone 2 and three points for Zone 3.
2. If dot is blue, when enough points have been accumulated, execute the hedge.
3. When dots are light blue, accumulate volume, but do not execute.
4. When dots turn red, do not hedge *and* set any accumulated volume to zero.
5. When dots turn gray, do not hedge *and* keep any accumulated the same.

### Counting Dot Points

The bands shown on the screen designate the Zones. Zone 1 is between the upper gray and black lines, Zone 2 between the two black lines and Zone 3 between the lower black and gray lines. The upper and lower zones are above and below the outer gray lines.

The example to the right shows how blue dots call for one point of hedging in Zone 1, two in Zone 2 and three in Zone 3.



### Turning from Light Blue to Blue

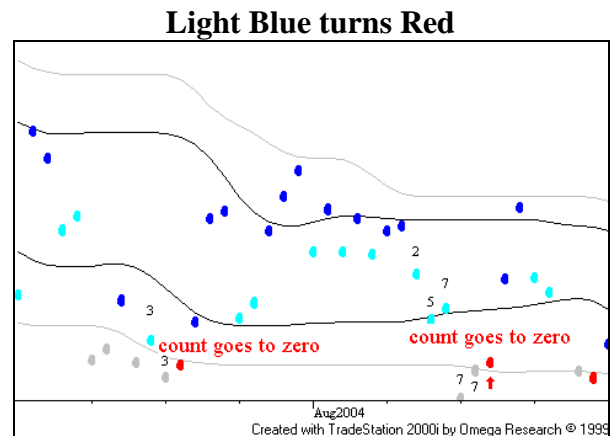
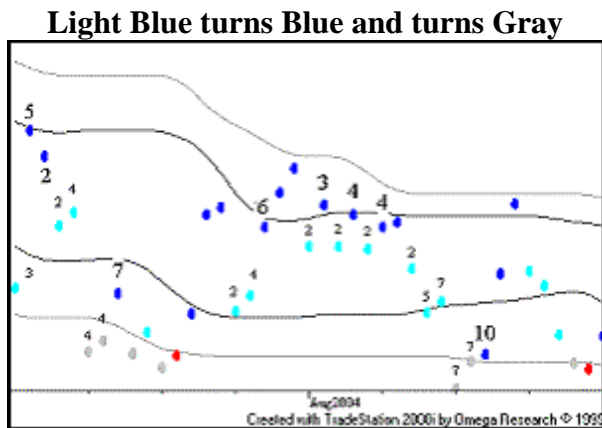
When dots are light blue, the amount associated with each zone is accumulated, but not hedged. In the chart on the left below, counting from left to right – the first light blue dot in Zone 3 accumulated three points. At the next dot, the color changed from light blue to blue and was in Zone 2. This adds two points, for a total of five points, which was then executed. The next dot to the right is blue, in Zone 2 for two points to be hedged immediately.

### Turning from Light Blue to Gray

On the same chart, the blue dots are then followed by two light blue dots in Zone 2, accumulating two points on each, for a total of four points. This is followed by two gray dots so that no more points are accumulated and the four points are held. This was followed by a blue dot in Zone 3 for another three points, or seven total, to be hedged immediately.

### Turning to Red

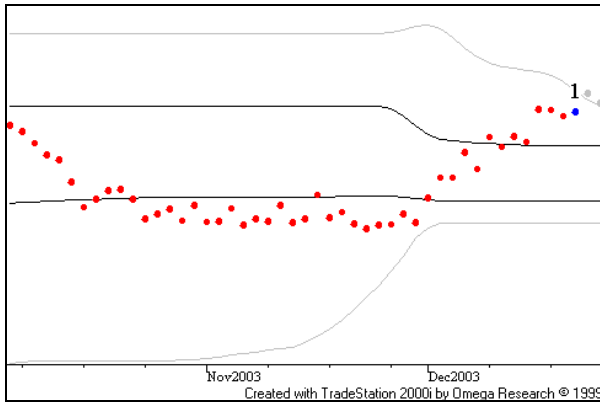
Now looking at the chart on the right, showing the same price data, following the blue dot there is a gray then a light blue dot in Zone 3, accumulating three points. The next dot was gray, so the three-point count was retained. The following day the dot turned red, so the count is set to zero and nothing is hedged.



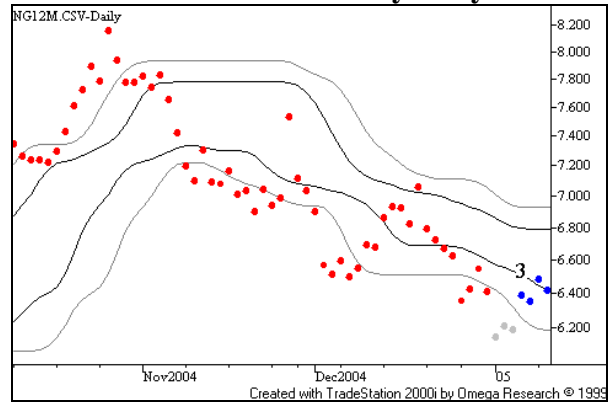
When dots are red no volume is accumulated nor hedged. The chart on the left below shows a series of red dots switching to a blue dot in Zone 1, in which case, one point is hedged

In the chart to the right a series of red dots is followed by three gray dots, and then a blue dot in Zone 3. Since red dots do not accumulate any points, the gray dots keep the accumulation count at zero. Then upon the blue dot in Zone 3, three points are hedged.

**Red Dot turns Blue**



**Red Dot followed by Gray**



**Gray and Light Blue Dots turn Blue**

In the chart below gray dots follow a series of red dots. Thus the accumulation count of zero was maintained for the first four gray dots. These are followed by two light blue dots, each in Zone 1, for a total of two points, one for each day. The following two gray dots retained the count of two. The following two days are light blue dots, one in Zone 1 and the other in Zone 2, for three additional points, bringing the count to five points. This was followed by a blue dot in Zone 1 that brought the count up to six points to be executed immediately.

**Gray Dots with Light Blue and Blue Dots**

