The methodology of this is explained below.

1. ***The system calculates the "straight line" interpolation for each intervening half hour between the supplied variables delivered for weather times A and B***

2. ***The system finds the Expected Values at the Weather Times A and B, and then calculates a "straight line" interpolation for each intervening half hour between these points***

3. ***The system calculates the % variance (positive or negative) of the loaded normal half hourly values against this straight line interpolation for each intervening half hourly period***

4. ***The half hourly variance % is then applied to the "straight line" values from step 1 to give the moving interpolation. This can be capped at a max and min (eg 9 and 0 for cloud)***

Numerically, this is below:

norma l (a)	delivered values (b)	HH interval (c)	"straight line" expected (d)	deviance from straight line (e)	straight line delivered points (f)	New interpolation (g)
X	A	0	=X+(Y-X)/2*0	=1-(d-a)/a	=A+(B-A)/2*0	=e*f
Y	B	1	=X+(Y-X)/2*1	=1-(d-a)/a	=A+(B-A)/2*1	=e*f
5.833	6.000	0	5.833	1.000	6.000	6.000
5.500		1.000	5.833	0.943	5.500	5.186
5.167		2.000	5.833	0.886	5.000	4.429
5.083		3.000	5.833	0.871	4.500	3.921
5.000		4.000	5.833	0.857	4.000	3.429
5.417		5.000	5.833	0.929	3.500	3.250
5.833	3.000	6.000	5.833	1.000	3.000	3.000

And graphically, over a longer period:

Cloud

Temperature

On inspection over the conditions in the case tested above, this algorithm holds true, as well as giving shape to periods with identical starting and ending values.