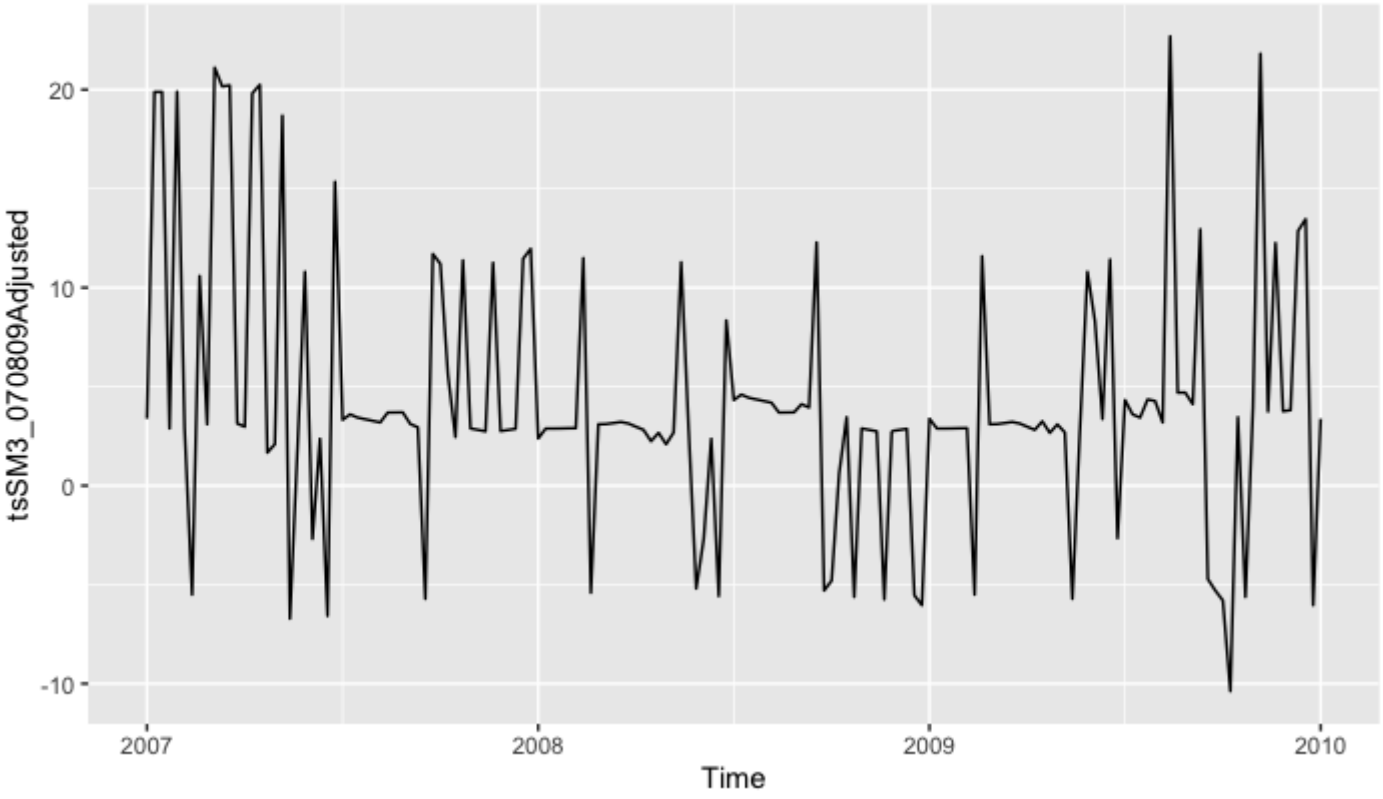
HoltWinters

Code

Submeter 3

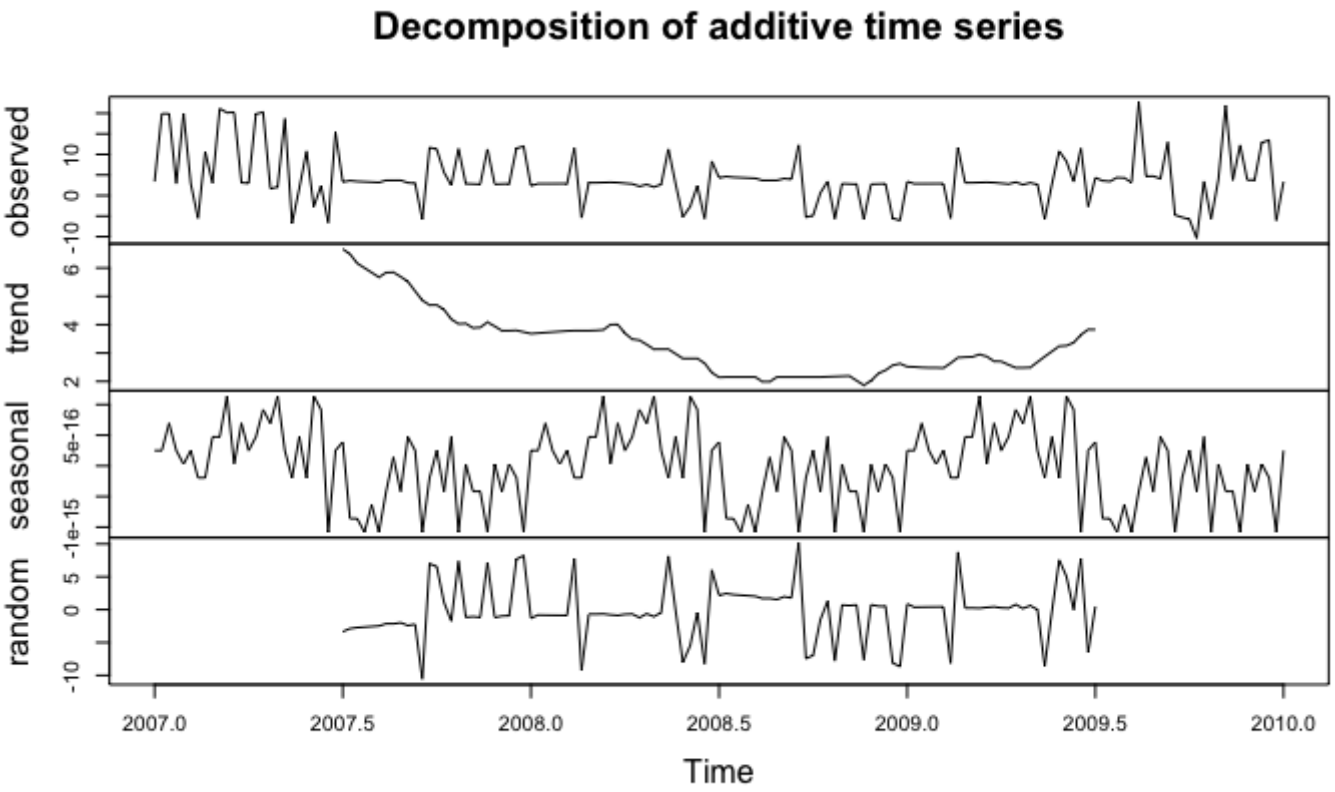
Hide

```
## Seasonal adjusting sub-meter 3 by subtracting the seasonal component & plot
tsSM3_070809Adjusted <- tsSM3_070809weekly - components070809SM3weekly$seasonal
autoplot(tsSM3_070809Adjusted)
```



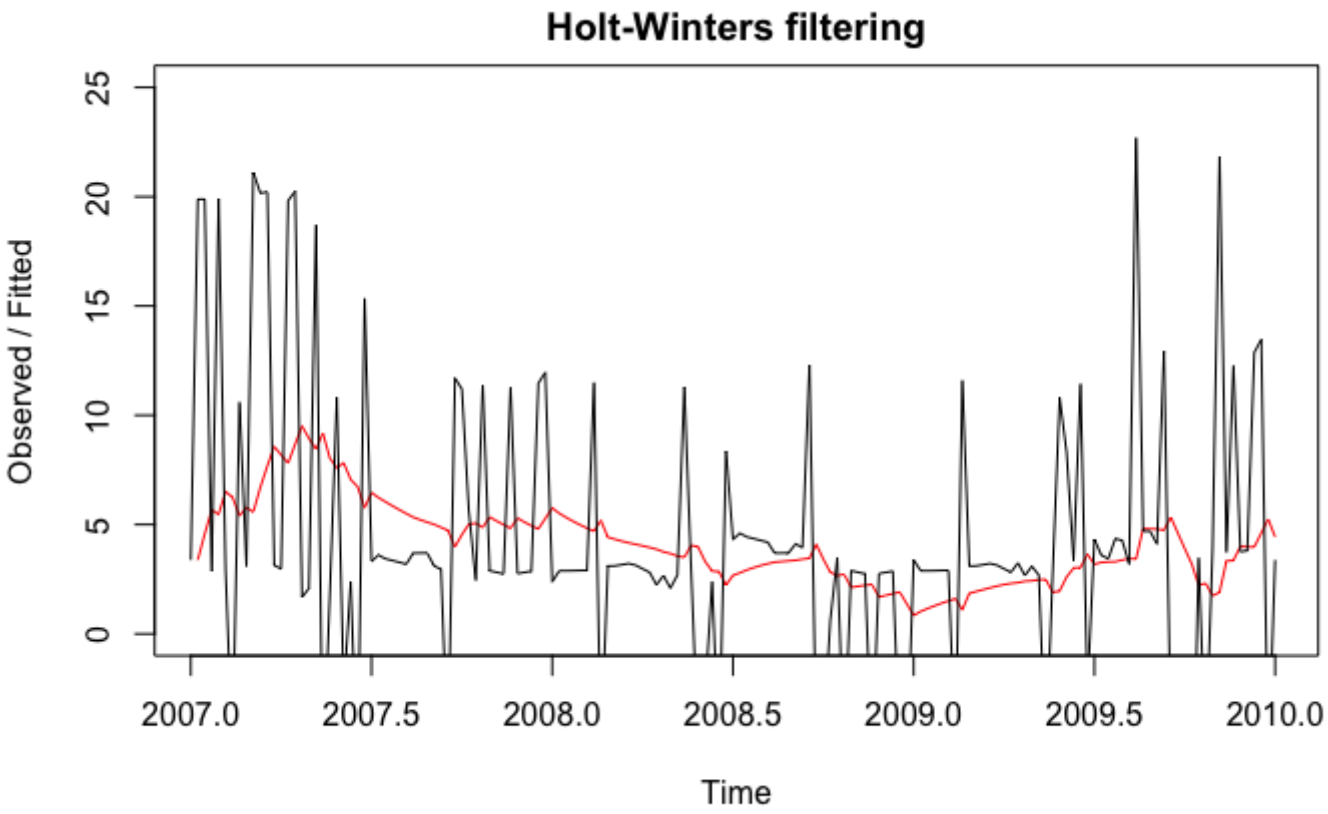
Hide

```
## Test Seasonal Adjustment by running Decompose again. Note the very, very small scale
 for Seasonal
plot(decompose(tsSM3_070809Adjusted))
```



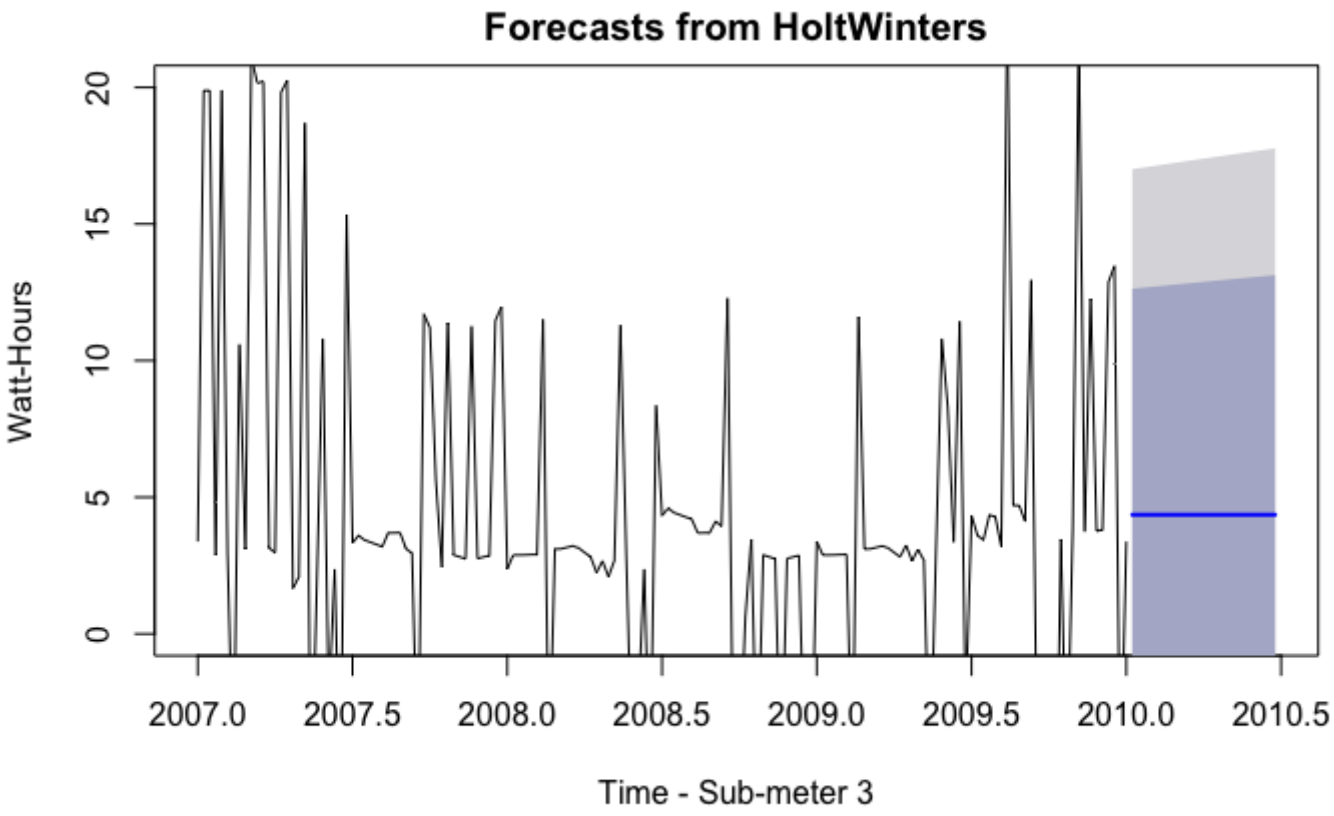
Hide

```
## Holt Winters Exponential Smoothing & Plot
tsSM3_HW070809 <- HoltWinters(tsSM3_070809Adjusted, beta=FALSE, gamma=FALSE)
plot(tsSM3_HW070809, ylim = c(0, 25))
```



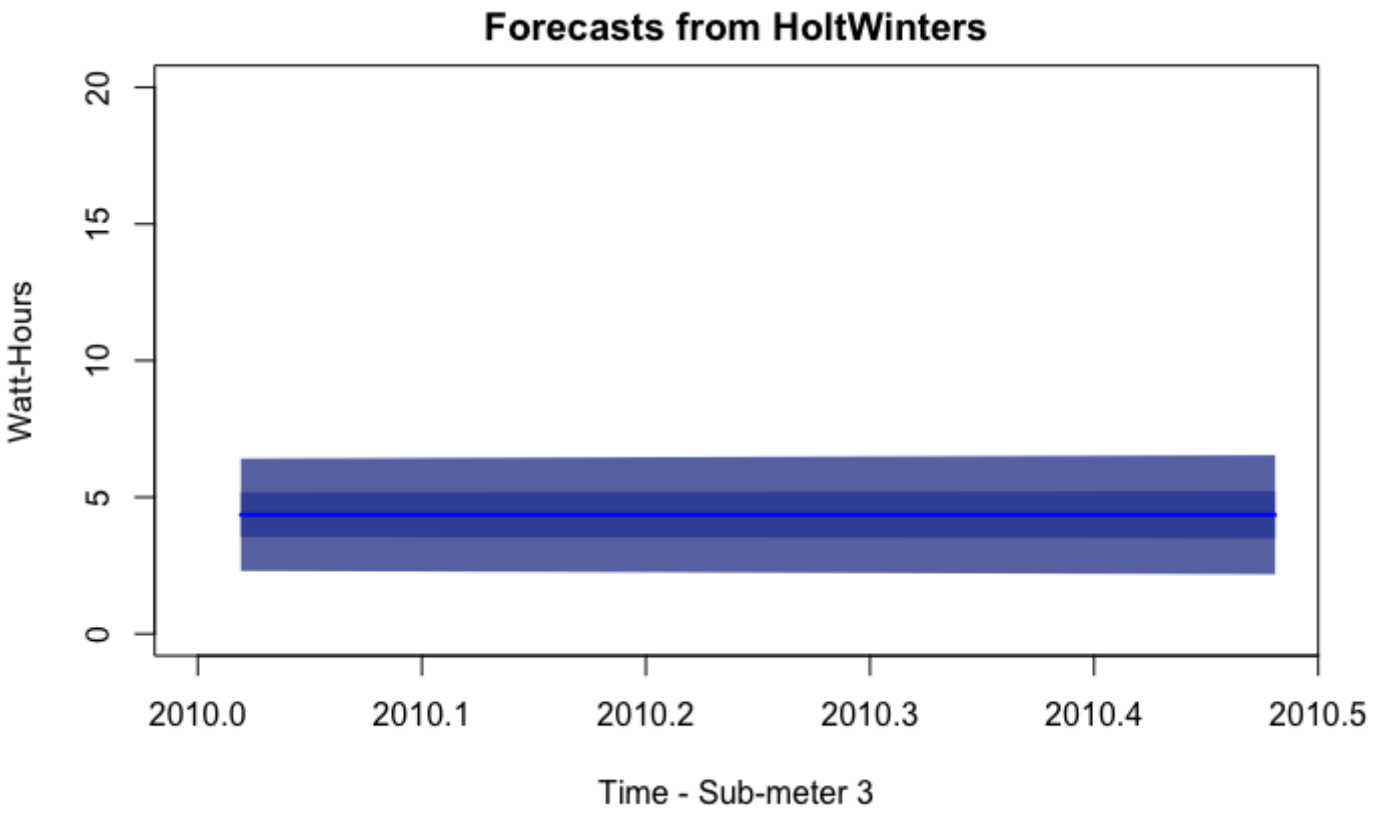
Hide

```
## HoltWinters forecast & plot
tsSM3_HW070809for <- forecast(tsSM3_HW070809, h=25)
plot(tsSM3_HW070809for, ylim = c(0, 20), ylab= "Watt-Hours", xlab="Time - Sub-meter 3")
```



Hide

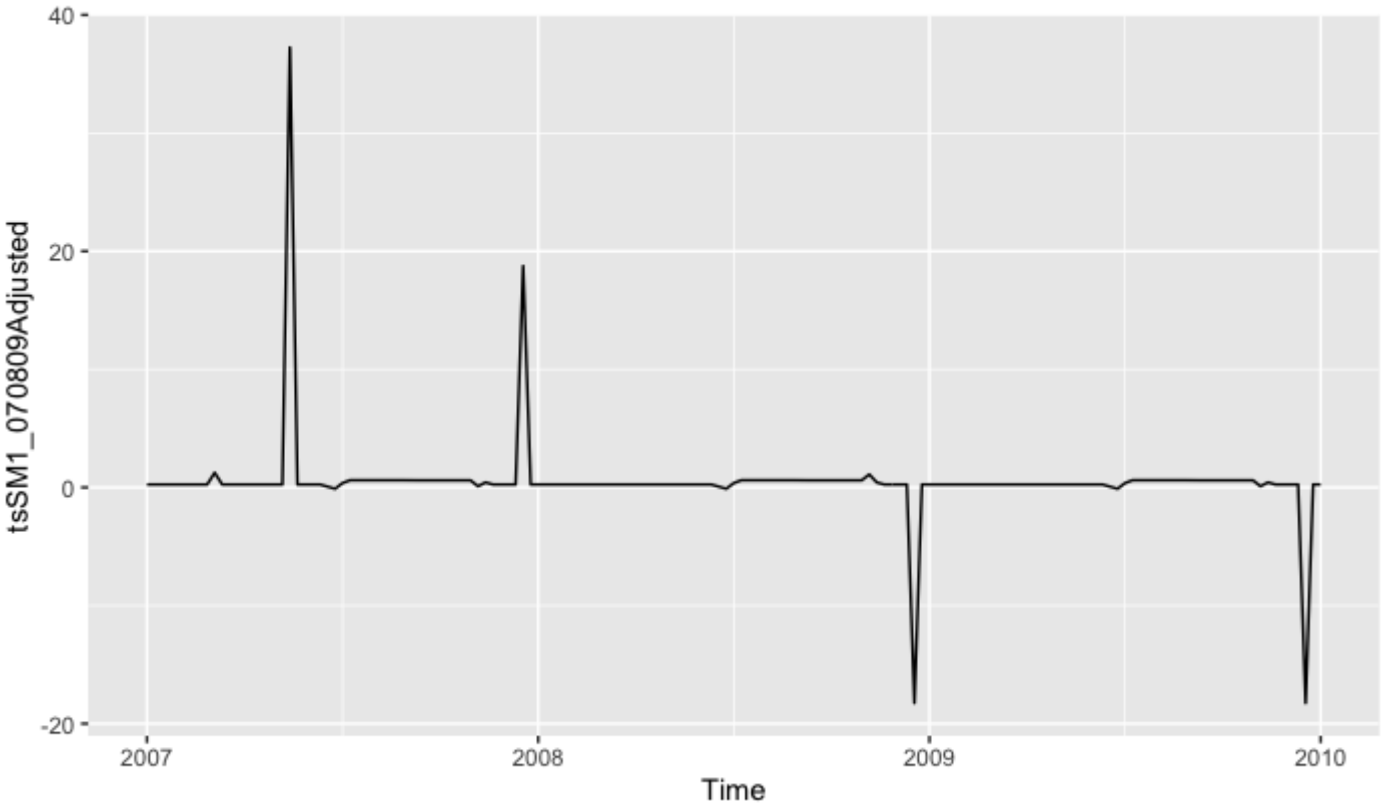
```
## Forecast HoltWinters with diminished confidence levels
tsSM3_HW070809forC <- forecast(tsSM3_HW070809, h=25, level=c(10,25))
## Plot only the forecasted area
plot(tsSM3_HW070809forC, ylim = c(0, 20), ylab= "Watt-Hours", xlab="Time - Sub-meter 3",
start(2010))
```



Submeter 1

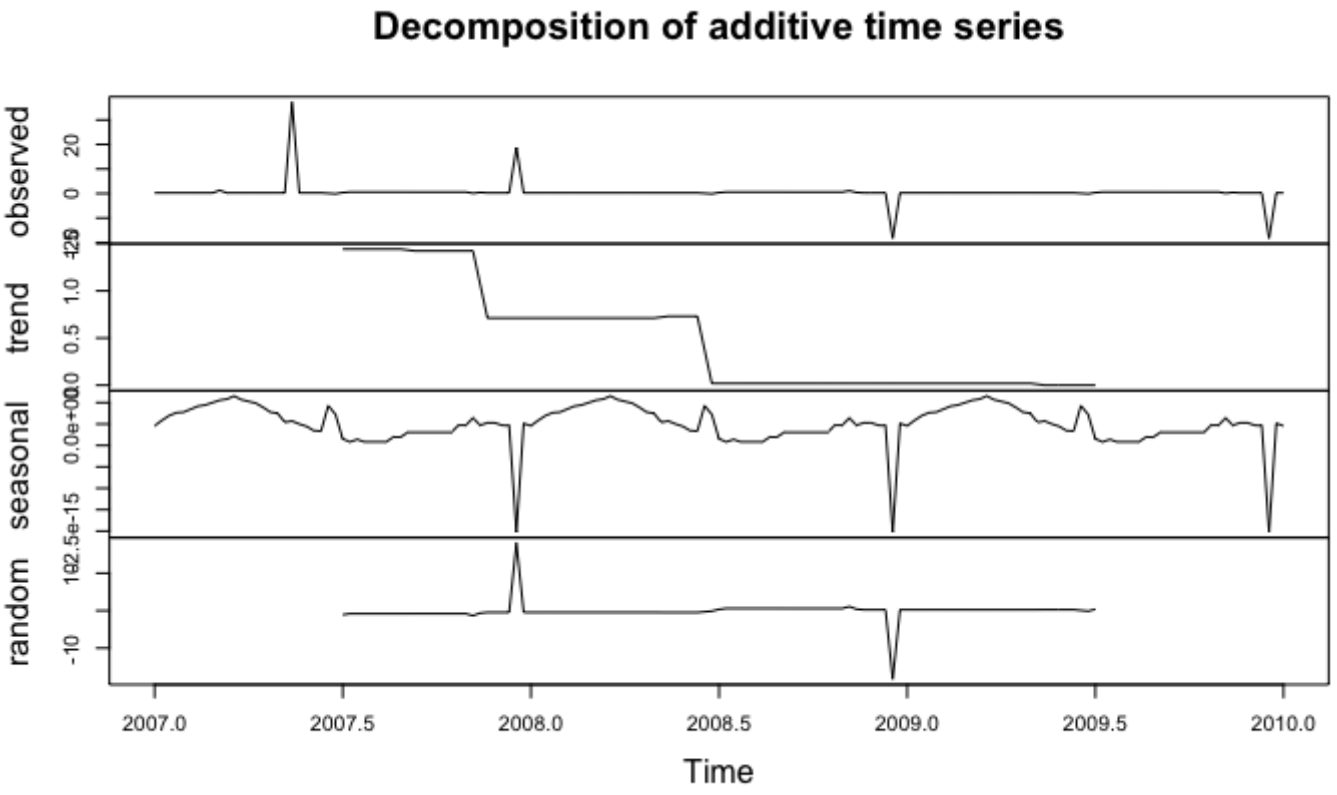
Hide

```
## Seasonal adjusting sub-meter 1 by subtracting the seasonal component & plot
tsSM1_070809Adjusted <- tsSM1_070809weekly - components070809SM1weekly$seasonal
autoplot(tsSM1_070809Adjusted)
```



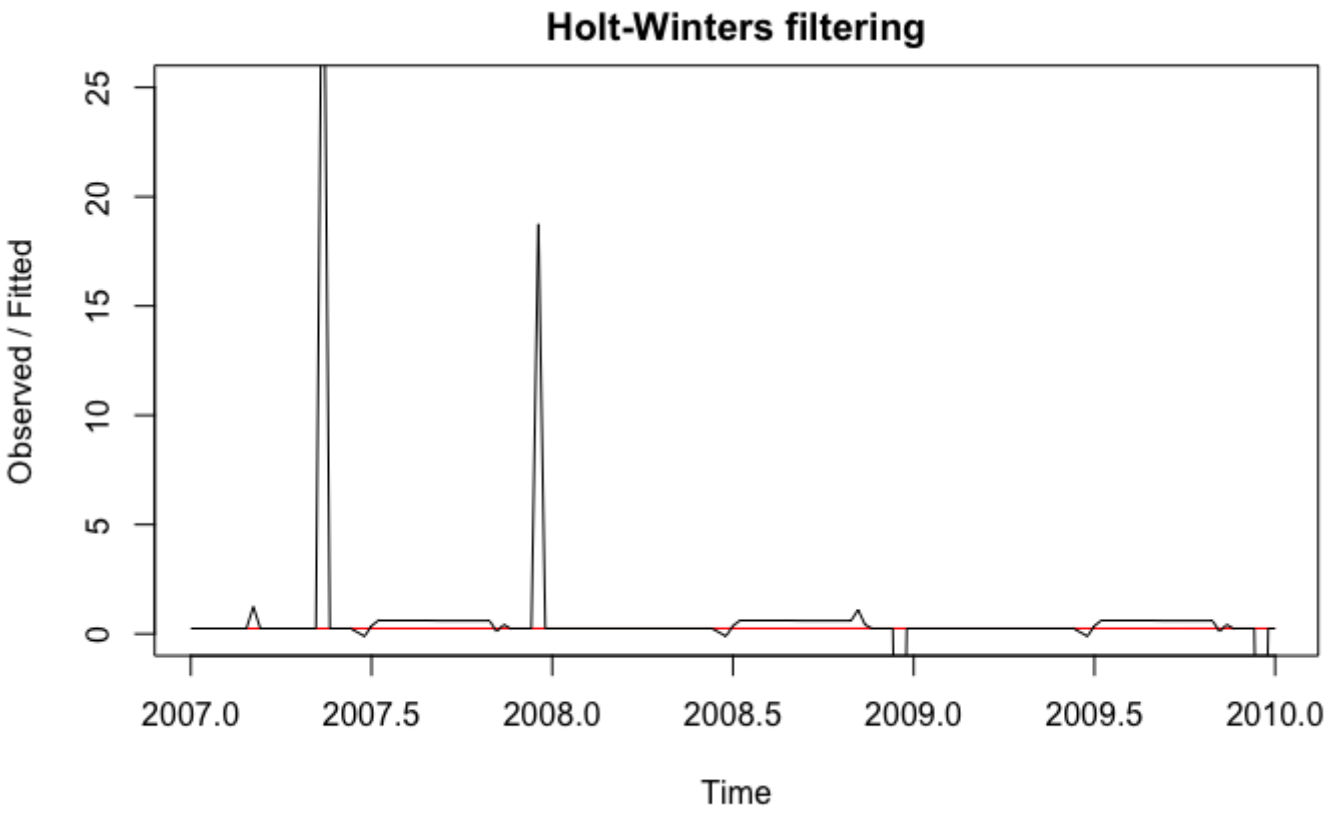
Hide

```
## Test Seasonal Adjustment by running Decompose again. Note the very, very small scale
 for Seasonal
plot(decompose(tsSM1_070809Adjusted))
```



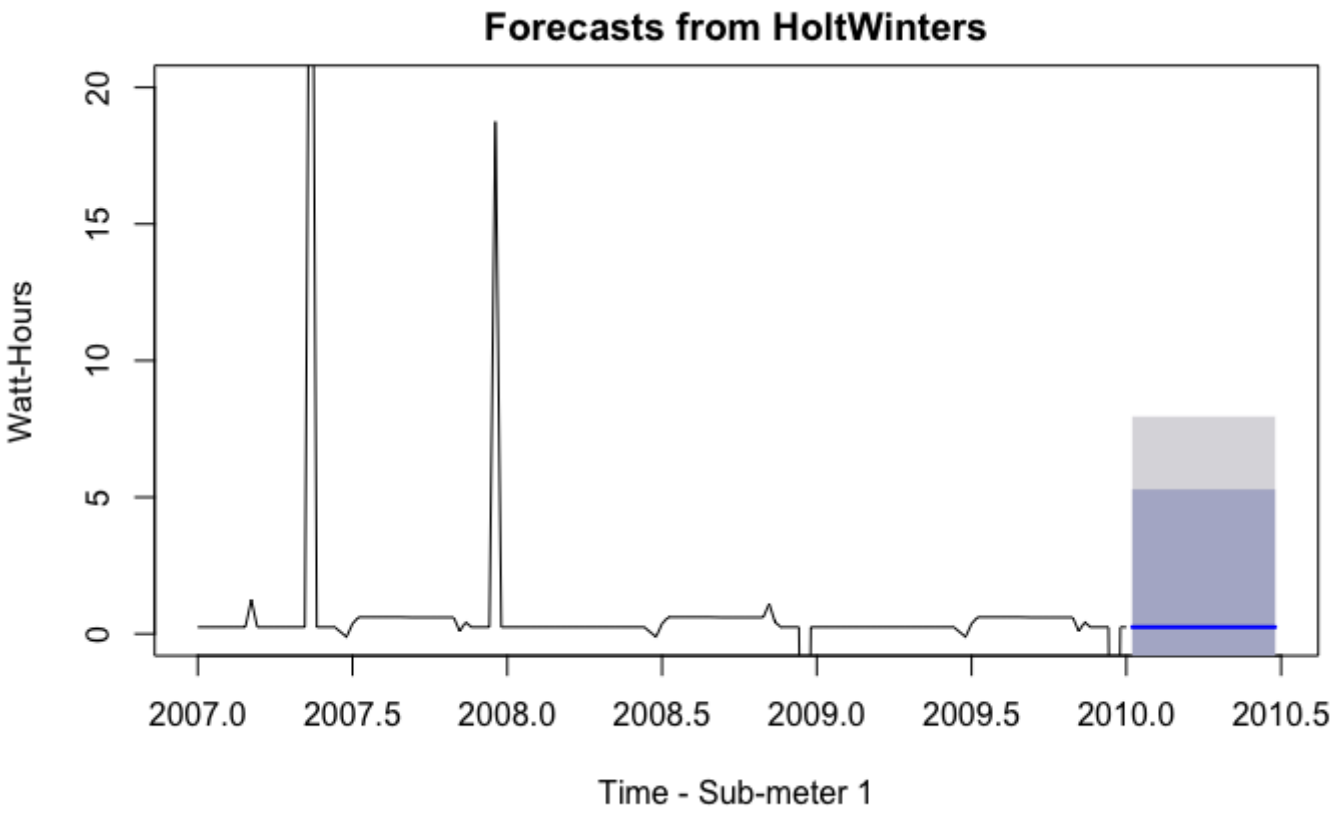
Hide

```
## Holt Winters Exponential Smoothing & Plot
tsSM1_HW070809 <- HoltWinters(tsSM1_070809Adjusted, beta=FALSE, gamma=FALSE)
plot(tsSM1_HW070809, ylim = c(0, 25))
```



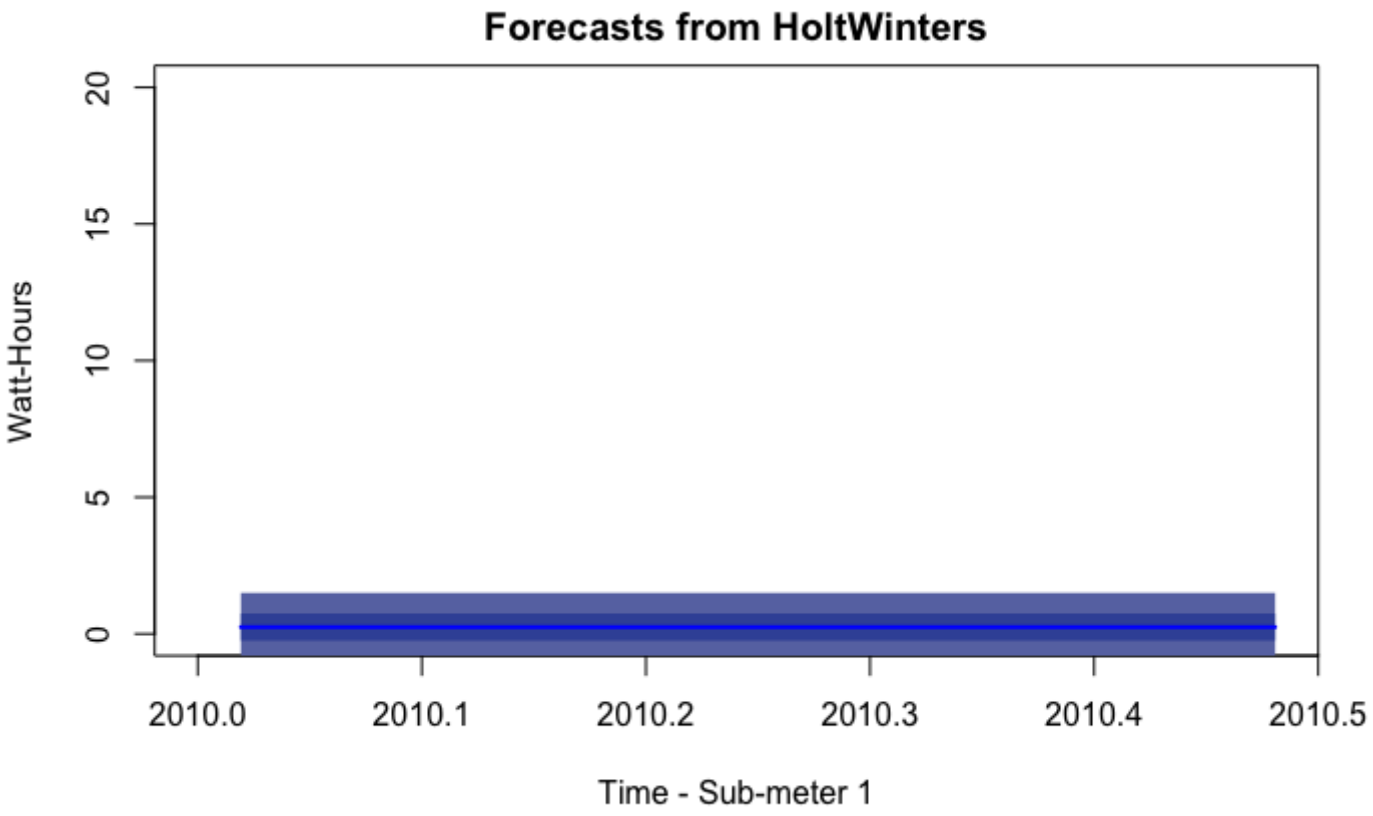
Hide

```
## HoltWinters forecast & plot
tsSM1_HW070809for <- forecast(tsSM1_HW070809, h=25)
plot(tsSM1_HW070809for, ylim = c(0, 20), ylab= "Watt-Hours", xlab="Time - Sub-meter 1")
```



Hide

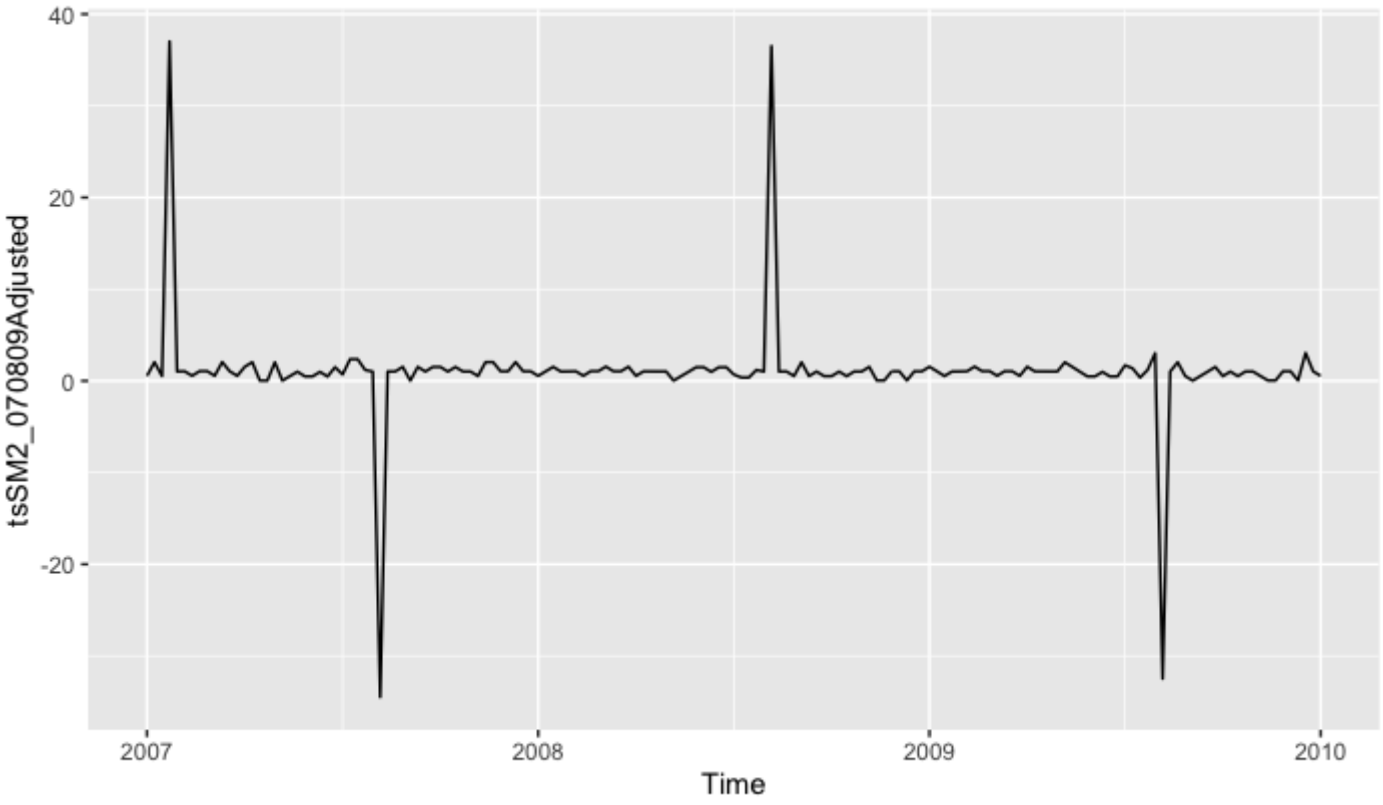
```
## Forecast HoltWinters with diminished confidence levels
tsSM1_HW070809forC <- forecast(tsSM1_HW070809, h=25, level=c(10,25))
## Plot only the forecasted area
plot(tsSM1_HW070809forC, ylim = c(0, 20), ylab= "Watt-Hours", xlab="Time - Sub-meter 1",
start(2010))
```



Submeter 2

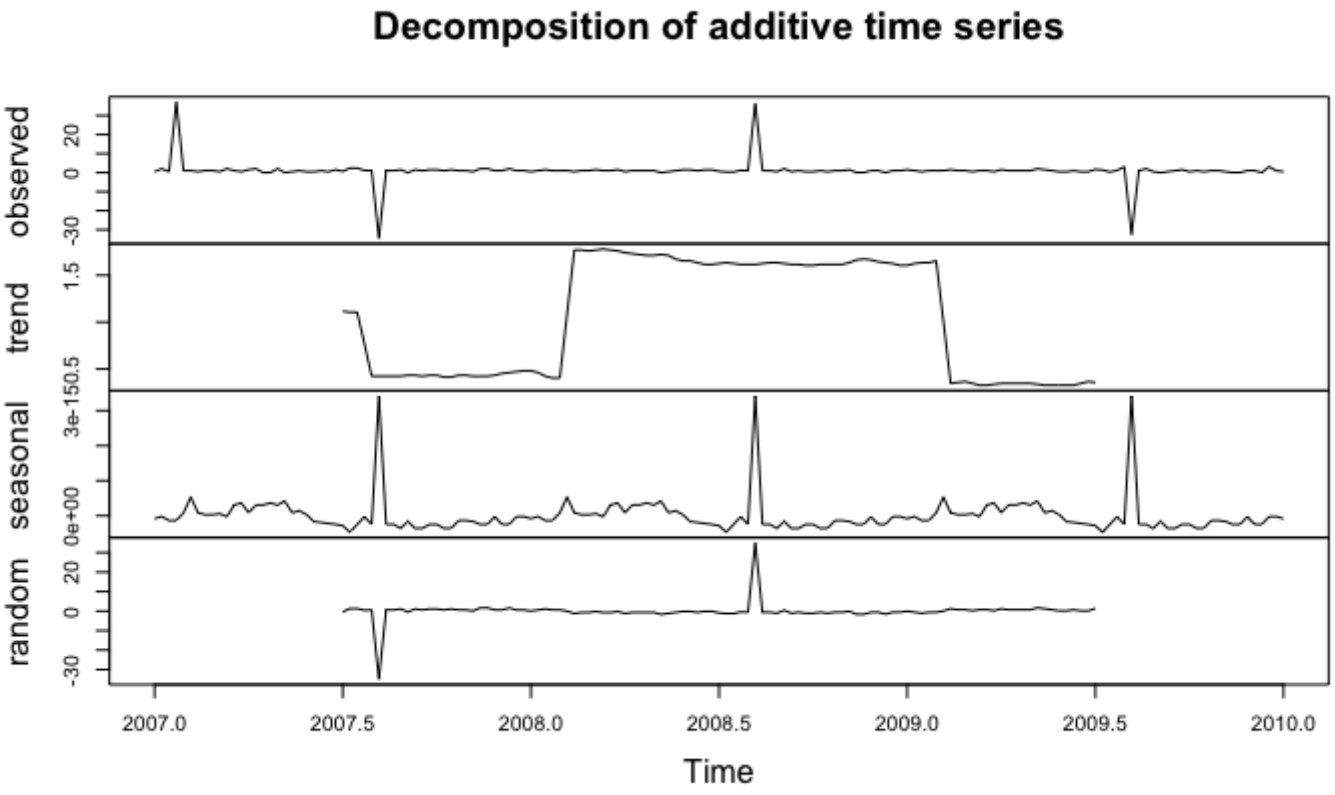
Hide

```
## Seasonal adjusting sub-meter 2 by subtracting the seasonal component & plot
tsSM2_070809Adjusted <- tsSM2_070809weekly - components070809SM2weekly$seasonal
autoplot(tsSM2_070809Adjusted)
```



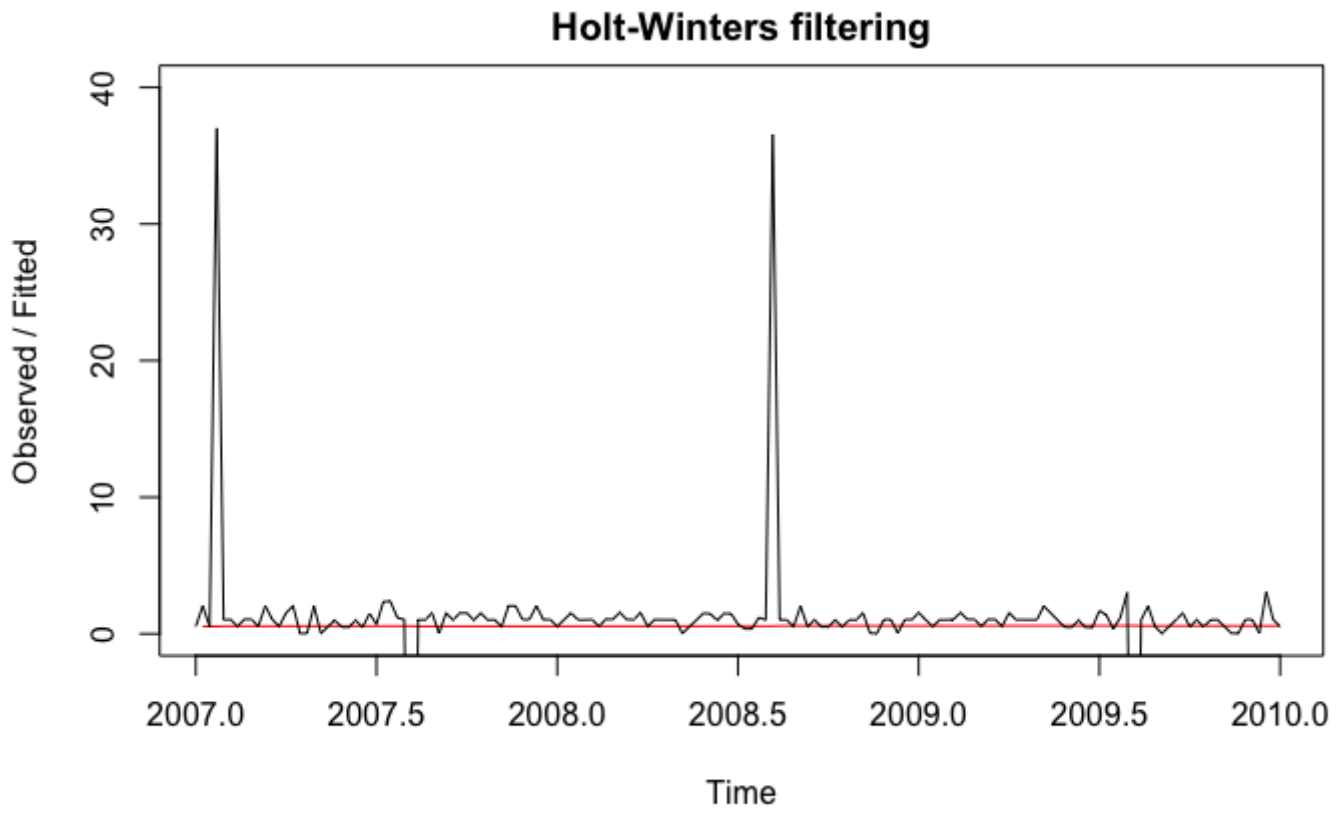
Hide

```
## Test Seasonal Adjustment by running Decompose again. Note the very, very small scale
 for Seasonal
plot(decompose(tsSM2_070809Adjusted))
```



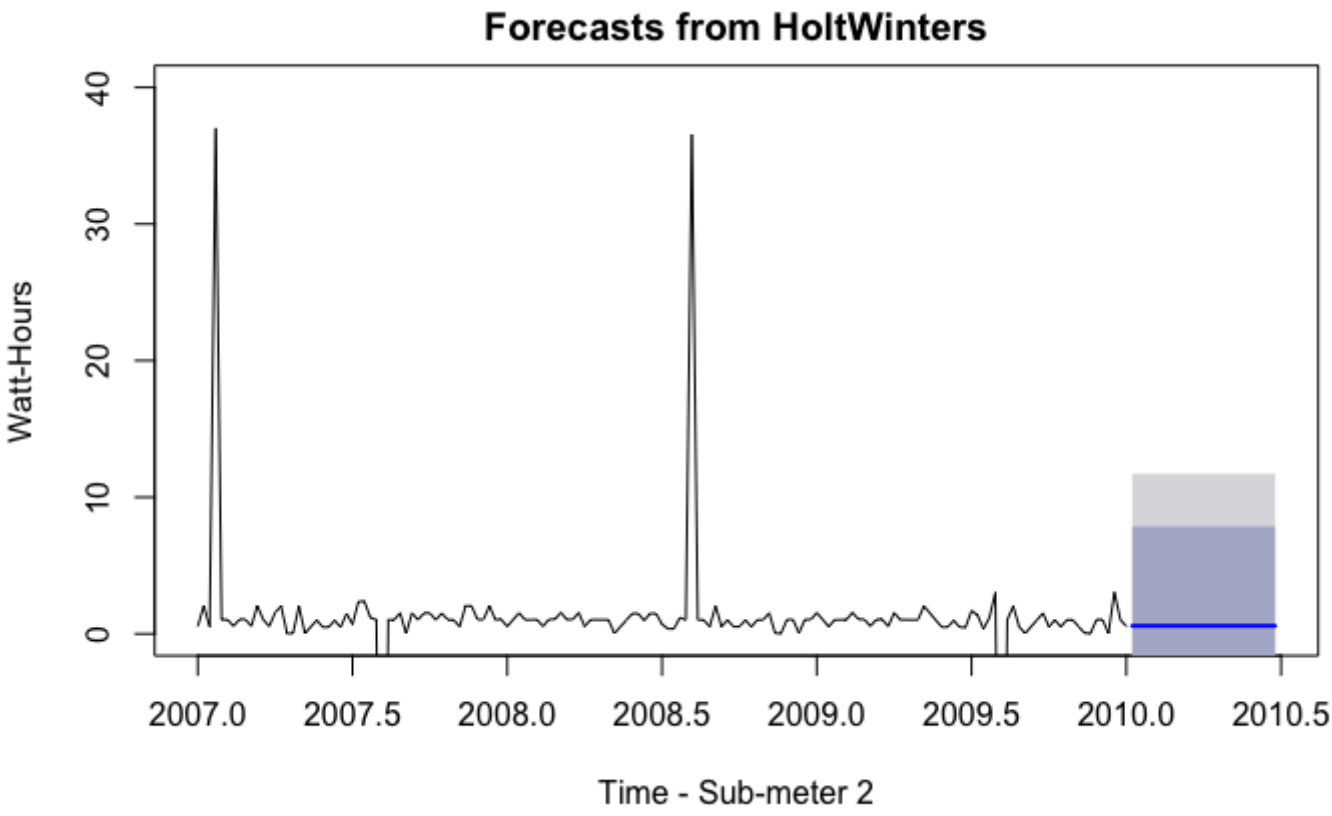
Hide

```
## Holt Winters Exponential Smoothing & Plot
tsSM2_HW070809 <- HoltWinters(tsSM2_070809Adjusted, beta=FALSE, gamma=FALSE)
plot(tsSM2_HW070809, ylim = c(0, 40))
```



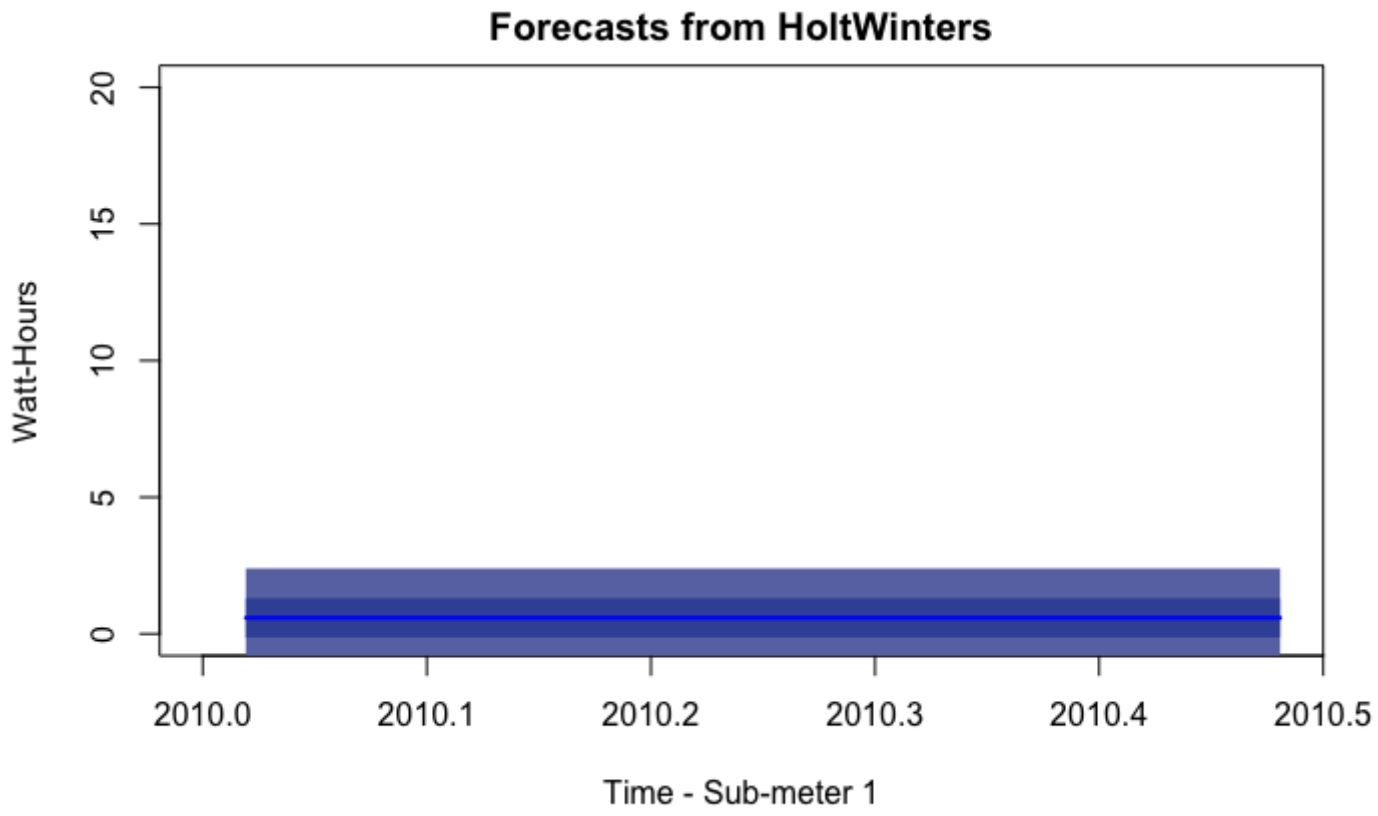
Hide

```
## HoltWinters forecast & plot
tsSM2_HW070809for <- forecast(tsSM2_HW070809, h=25)
plot(tsSM2_HW070809for, ylim = c(0, 40), ylab= "Watt-Hours", xlab="Time - Sub-meter 2")
```



Hide

```
## Forecast HoltWinters with diminished confidence levels
tsSM2_HW070809forC <- forecast(tsSM2_HW070809, h=25, level=c(10,25))
## Plot only the forecasted area
plot(tsSM2_HW070809forC, ylim = c(0, 20), ylab= "Watt-Hours", xlab="Time - Sub-meter 1",
start(2010))
```



holt winters, pre