

## Simulation

1. Use estimated parameters from actual data set to generate 100 simulated new data sets each that follow the data model.
2. Estimate total BTUs used ( $\hat{B}_i$ ) on each simulated data set  $i$ .
3. Compare average of  $\hat{B}_i$  with original ( $B$ ). Also compare  $SD(\hat{B}_i)$  with original estimate ( $SD_{orig}$ ).

### Results (3 original data sets)

N	B	ave( $\hat{B}_i$ )	$SD_{orig}$	SD( $\hat{B}_i$ )
194	5773.6	5780.7	69.4	93.9
142	4275.3	4280.6	68.4	111.4
140	3521.7	3526.6	72.8	65.4

## Conclusions

Little or no bias in estimating total BTUs used. Estimates of variance were low on 2 of three data sets, probably because of failure of data to follow the assumed autoregressive model.