

## Fuel System

Natural gas for the CHP system is supplied from a dedicated service take-off and utility meter for the CHP system. The system operates on low-pressure natural gas with no external gas booster. No pulse output or gas sub-meter is installed, so historic manual gas readings provided by the site (Table 5) were used to calculate a normalized gas consumption rate based on gross kWh generated.

Table 5. Gas Data for Birchwood Kyoto

Billing Date	Gas Reading (ccf)	Generator Gas Consumption (ccf)
25-Feb-15	0	N/A
23-Apr-15	2,904	2,904
23-May-15	2,904	0
9-Jun-15	3,726	822
23-Jul-15	7,331	3,605
31-Aug-15	15,139	7,808
23-Sep-15	18,206	3,067
24-Oct-15	23,553	5,347
24-Nov-15	28,229	4,676
22-Dec-15	33,088	4,859
22-Jan-16	39,222	6,134
23-Feb-16	43,416	4,194
21-Mar-16	48,516	5,100
18-Apr-16	53,975	5,459
20-May-16	57,544	3,569

Comparing the gas data to the gross CHP generator output during regular operation (6/9/2015 to 5/20/2016), the electrical output per natural gas input is reasonably constant at a rate of 12.8 SCF/kWh (Figure 9). This is consistent with design specifications of 12.4 SCF/kWh (75 kW gross output and 930 SCF/h of natural gas input). The rate of 12.8 SCF/kWh is used to calculate performance indicators shown on the NYSERDA CHP website.

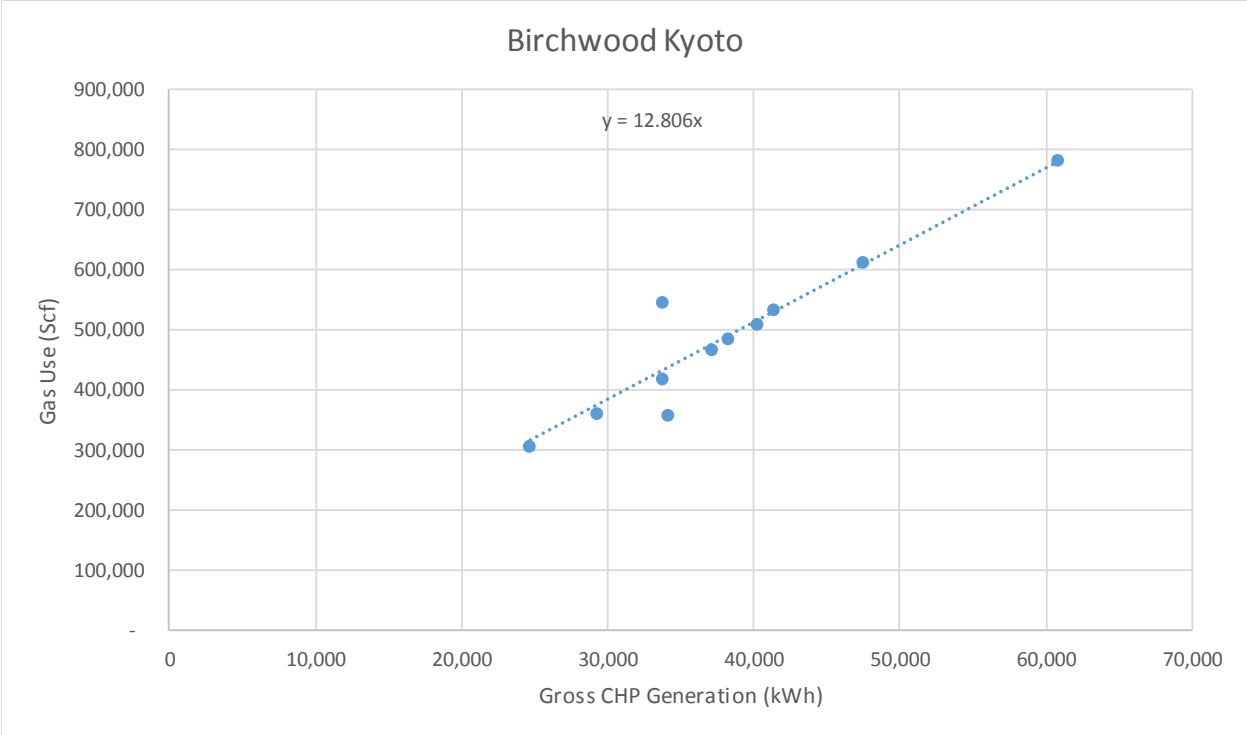


Figure 9. Relationship between Gross CHP Generation and Natural Gas Use