



```

name: <unnamed>
log: /home/olvar/teaching/ms_thesis/2012/cecilie/model/cj_ver5.smcl
log type: smcl
opened on: 6 Dec 2012, 10:29:46
    
```

```

1 .
2 . use "../data/nphour.dta", clear
   (NordPool Hourly System Dates)
3 .
4 . tab year idx
    
```

Year	Sample index (old NO1)		Total
	0	1	
2002	8,736	0	8,736
2003	3,864	4,872	8,736
2004	0	8,904	8,904
2005	0	8,736	8,736
2006	0	8,736	8,736
2007	0	8,736	8,736
2008	0	8,736	8,736
2009	0	8,904	8,904
2010	8,568	168	8,736
2011	8,736	0	8,736
2012	7,464	0	7,464
Total	37,368	57,792	95,160

```
5 . tab year idz
```

Year	Sample index (NO1 pre NorNed)		Total
	0	1	
2002	8,736	0	8,736
2003	8,736	0	8,736
2004	2,520	6,384	8,904
2005	0	8,736	8,736
2006	0	8,736	8,736
2007	0	8,736	8,736
2008	6,216	2,520	8,736
2009	8,904	0	8,904
2010	8,736	0	8,736
2011	8,736	0	8,736
2012	7,464	0	7,464
Total	60,048	35,112	95,160

```

6 .
7 . drop if year>2011
   (7464 observations deleted)
8 . keep if idz
   (52584 observations deleted)
9 .
10.
11. di _newline
    
```

```

12.
13. di "/SUPPLY & DEMAND NO1/"
   /SUPPLY & DEMAND NO1/
14.
15. di _newline

16.
17. gen t = _n
18. sort t
19. tsset t
   time variable: t, 1 to 35112
   delta: 1 unit

20. ipolate temp_osl t, generate(temp_osl)
21. drop t
22. sort time
23. tsset time, clocktime delta(1 hour)
   time variable: time, 12apr2004 00:00:00.000 to
   13apr2008 23:00:00.000
   delta: 1 hour

24.
25. label var temp_osl "temperature in Oslo"
26.
27. di _newline

28.
29. gen heatdeg_osl = 0

30. replace heatdeg_osl = (17-temp_osl) if temp_osl < 17
   (31230 real changes made)

31. label var heatdeg_osl "Heating degree Oslo when temp_osl<17"

32.
33. gen lnheatdeg_osl = 0

34. replace lnheatdeg_osl = ln(heatdeg_osl) if heatdeg_osl > 1
   (30226 real changes made)

35. label var lnheatdeg_osl "Log of heatingdegree in Oslo"

36.
37. gen lnheatdeg_osl_2 = (lnheatdeg_osl)*(lnheatdeg_osl)

38. label var lnheatdeg_osl_2 "lnheatdeg_osl squared"

39.
40. gen rel_reservoir_nol = (1/nol_short)

41. label var rel_reservoir_nol "Relative reservoir filling"

42.
43. gen lnrel_reservoir_nol = ln(rel_reservoir_nol)
    
```

```

44. list date year week day hour idz rel_reservoir_nol if lnrel_reservoir_nol==. & id
   > z
45. tab year if lnrel_reservoir_nol==.
   no observations
46. label var lnrel_reservoir_nol "Log of relativ reservoir in N01"
47.
48. gen lnprod_nol = ln(prod_nol)
49. list date year week day hour idz prod_nol if lnprod_nol==.
50. label var lnprod_nol "log of prod_nol"
51.
52. gen lnprice_nol = ln(price_nol)
53. list date year week day hour idz price_nol if lnprice_nol==.
54. //if price equal to zero in some hours --> fix it
55. replace lnprice_nol = ln(0.01) if price_nol<0.01
   (0 real changes made)
56. label var lnprice_nol "log of price_nol"
57.
58. gen lnpccoal = ln(pcoal)
59. label var lnpccoal "log of pcoal"
60. gen lnpoil = ln(poil)
61. label var lnpoil "log of poil"
62.
63. gen lnco2_p = 0
64. replace lnco2_p = ln(co2_p) if co2_p>1
   (27792 real changes made)
65. sum lnco2_p

```

Variable	Obs	Mean	Std. Dev.	Min	Max
lnco2_p	35112	2.414976	1.254742	0	3.543854

```

66. label var lnco2_p "log of co2_p"
67.
68. gen lncons_nol = ln(cons_nol)
69. list date year week day hour idz cons_nol if lncons_nol==.
70. label var lncons_nol "log of cons_nol"
71.
72. gen lndlength_osl = ln(dlength_osl)
73. label var lndlength_osl "log of daylength in Oslo"
74.
75. gen lngen_dkl_wind = 0
76. list date year week day hour idz gen_dkl_wind if lngen_dkl_wind==. & idz

```

```

77. //if generation of wind is equal to zero in some hours --> fix it
78. replace lngen_dkl_wind = ln(0.01) if gen_dkl_wind<0.01
   (2 real changes made)
79. replace lngen_dkl_wind = ln(gen_dkl_wind) if gen_dkl_wind>=0.01
   (35103 real changes made)
80. label var lngen_dkl_wind "Log of gen_dkl_wind"
81.
82. gen lnprice_eexh = ln(price_eex)
   (57 missing values generated)
83. //list date year week day hour idz price_eex if lnprice_eexh==.
84. //if price equal to zero in some hours --> fix it
85. replace lnprice_eexh = ln(0.01) if price_eex<0.01
   (57 real changes made)
86. label var lnprice_eexh "Log of price_eex"
87.
88. gen lnprice_eexd = ln(price_eexd)
89. list date year week day hour idz price_eexd if lnprice_eexd==.
90. //if price equal to zero in some hours --> fix it
91. replace lnprice_eexd = ln(0.01) if price_eexd<0.01
   (0 real changes made)
92. label var lnprice_eexd "Log of price_eexd"
93.
94. gen lnipi = ln(ipi)
95.
96. di _newline
97.
98. //
99. // add a number of things here - better testing
100. //
101. forvalues h = 1/24 {
2. di _newline
3. di "*****"
4. di " " Supply N01 hour: " `h' "
5. di "*****"
6. di _newline
7.
102. preserve
8. keep if hour=='h' & idz
9. sort date
10. tsset date, daily
11. tsreport, report report0 list
12.
103. ivregress 2sls lnprice_nol lnrel_reservoir_nol lnpoil lnco2_p co2_d trend tsin
> tcos lnipi ///
> (lnprod_nol = lnheatdeg_osl lnheatdeg_osl_2 dsumm dwkday lndlength_osl), ///
> vce(hac bartlett 7)
13.
104. di _newline
14. estat first
15.
105. di _newline
16. estat endog
17.

```

```
106 di_newline
18. estat overid
19.
107 restore
20. }
```

```
*****
* Supply NO1 hour: 1
*****
```

```
(33649 observations deleted)
time variable: date, 12.04.2004 to 13.04.2008
delta: 1 day
```

Number of gaps in sample: 0

```
Instrumental variables (2SLS) regression      Number of obs = 1463
Wald chi2(9) = 504.42
Prob > chi2 = 0.0000
R-squared = 0.6717
Root MSE = .26894
```

lnprice_nol	Coef.	HAC Std. Err.	z	P> z	[95% Conf. Interval]
lnprod_nol	.3341911	.1829528	1.83	0.068	-.0243899 .6927721
lnrel_rese-1	-2.921119	.2402912	-12.16	0.000	-3.392081 -2.450157
lnpoil	1.597086	.2181437	7.32	0.000	1.169532 2.02464
lnco2_p	.2311842	.0789726	2.93	0.003	.0764007 .3859678
co2_d	-.8045675	.2077531	-3.87	0.000	-1.211756 -.3973788
trend	-.0007311	.0001212	-6.03	0.000	-.0009686 -.0004936
tsin	.2494505	.0459619	5.43	0.000	.1593668 .3395341
tcos	.2827966	.0512502	5.52	0.000	.182348 .3832452
lnipi	.8327678	.3279419	2.54	0.011	.1900135 1.475522
_cons	-8.190606	2.332943	-3.51	0.000	-12.76309 -3.618122

```
Instrumented: lnprod_nol
Instruments: lnrel_reservoir_nol lnpoil lnco2_p co2_d trend tsin tcos lnipi
lnheatdeg_osl lnheatdeg_osl_2 dsumm dwkday lndlength_osl
HAC VCE: Bartlett kernel with 7 lags
```

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(5,1449)	Prob > F
lnprod_nol	0.7764	0.7744	0.1801	35.5506	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
Ho: variables are exogenous

HAC score chi2(1) = 6.51276 (p = 0.0107)  
(Prewhitening performed with 1 lag)

HAC regression F(1,1452) = 7.30385 (p = 0.0070)  
(Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(4) = .697396 (p = 0.9516)  
(Prewhitening performed with 1 lag)

```
*****
* Supply NO1 hour: 2
*****
```

```
(33649 observations deleted)
time variable: date, 12.04.2004 to 13.04.2008
delta: 1 day
```

Number of gaps in sample: 0

```
Instrumental variables (2SLS) regression      Number of obs = 1463
Wald chi2(9) = 489.94
Prob > chi2 = 0.0000
R-squared = 0.6490
Root MSE = .29079
```

lnprice_nol	Coef.	HAC Std. Err.	z	P> z	[95% Conf. Interval]
lnprod_nol	.4302582	.1887427	2.28	0.023	.0603292 .8001871
lnrel_rese-1	-3.092622	.2510172	-12.32	0.000	-3.584606 -2.600637
lnpoil	1.663601	.2317129	7.18	0.000	1.209452 2.11775
lnco2_p	.2366502	.0839838	2.82	0.005	.072045 .4012554
co2_d	-.8472796	.2177903	-3.89	0.000	-1.274141 -.4204186
trend	-.0007581	.0001297	-5.84	0.000	-.0010122 -.0005039
tsin	.2586489	.0481066	5.38	0.000	.1643617 .352936
tcos	.2824494	.0564408	5.00	0.000	.1718275 .3930713
lnipi	.8388524	.3570676	2.35	0.019	.1390128 1.538692
_cons	-9.273108	2.451514	-3.78	0.000	-14.07799 -4.468228

```
Instrumented: lnprod_nol
Instruments: lnrel_reservoir_nol lnpoil lnco2_p co2_d trend tsin tcos lnipi
lnheatdeg_osl lnheatdeg_osl_2 dsumm dwkday lndlength_osl
HAC VCE: Bartlett kernel with 7 lags
```

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(5,1449)	Prob > F
lnprod_nol	0.7717	0.7697	0.1785	40.3097	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
Ho: variables are exogenous

HAC score chi2(1) = 9.8109 (p = 0.0017)  
(Prewhitening performed with 1 lag)

HAC regression F(1,1452) = 9.71865 (p = 0.0019)  
(Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(4) = 1.07941 (p = 0.8975)  
(Prewhitening performed with 1 lag)

```
*****
* Supply NO1 hour: 3
*****
```

```
(33649 observations deleted)
time variable: date, 12.04.2004 to 13.04.2008
delta: 1 day
```

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(9) = 487.16  
 Prob > chi2 = 0.0000  
 R-squared = 0.6275  
 Root MSE = .31172

lnprice_nol	HAC		z	P> z	[95% Conf. Interval]	
	Coef.	Std. Err.				
lnprod_nol	.506735	.2026902	2.50	0.012	.1094696	-.9040005
lnrel_rese-1	-3.226821	.2490394	-12.96	0.000	-3.71493	-2.738713
lnpoil	1.71127	.2447535	6.99	0.000	1.231562	2.190978
lnco2_p	.2378771	.0891233	2.67	0.008	.0631986	-.4125555
co2_d	-.8663399	.2306285	-3.76	0.000	-1.318363	-.4143165
trend	-.0007793	.0001347	-5.79	0.000	-.0010432	-.0005153
tsin	.2664419	.0501959	5.31	0.000	.1680597	.3648241
tcos	.2830455	.0628841	4.50	0.000	.1597949	.4062961
lnipi	.8514488	.3756728	2.27	0.023	.1151438	1.587754
_cons	-10.1544	2.508539	-4.05	0.000	-15.07104	-5.237752

Instrumented: lnprod\_nol  
 Instruments: lnrel\_reservoir\_nol lnpoil lnco2\_p co2\_d trend tsin tcos lnipi  
 lnheatdeg\_osl lnheatdeg\_osl\_2 dsumm dwkday lndlength\_osl  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(5,1449)	Prob > F
lnprod_nol	0.7672	0.7651	0.1788	41.6381	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
 Ho: variables are exogenous

HAC score chi2(1) = 11.319 (p = 0.0008)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1452) = 10.6812 (p = 0.0011)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(4) = 1.57547 (p = 0.8132)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Supply NOL hour: 4  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(9) = 467.23  
 Prob > chi2 = 0.0000  
 R-squared = 0.6156  
 Root MSE = .32644

lnprice_nol	HAC		z	P> z	[95% Conf. Interval]	
	Coef.	Std. Err.				
lnprod_nol	.5654521	.210992	2.68	0.007	.1519154	-.9789889
lnrel_rese-1	-3.341084	.2520164	-13.26	0.000	-3.835027	-2.847141
lnpoil	1.736348	.2528177	6.87	0.000	1.240834	2.231861
lnco2_p	.2403185	.093468	2.57	0.010	.0571246	-.4235123
co2_d	-.8916484	.2437308	-3.66	0.000	-1.369352	-.4139448
trend	-.0007874	.0001369	-5.75	0.000	-.0010559	-.000519
tsin	.2734928	.0516157	5.30	0.000	.1723278	.3746577
tcos	.2874416	.066462	4.32	0.000	.1571785	.4177047
lnipi	.8458043	.3841623	2.20	0.028	.0928599	1.598749
_cons	-10.72344	2.566698	-4.18	0.000	-15.75408	-5.692803

Instrumented: lnprod\_nol  
 Instruments: lnrel\_reservoir\_nol lnpoil lnco2\_p co2\_d trend tsin tcos lnipi  
 lnheatdeg\_osl lnheatdeg\_osl\_2 dsumm dwkday lndlength\_osl  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(5,1449)	Prob > F
lnprod_nol	0.7706	0.7685	0.1825	46.2859	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
 Ho: variables are exogenous

HAC score chi2(1) = 11.932 (p = 0.0006)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1452) = 11.2644 (p = 0.0008)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(4) = 1.30278 (p = 0.8609)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Supply NOL hour: 5  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(9) = 488.29  
 Prob > chi2 = 0.0000  
 R-squared = 0.6325  
 Root MSE = .32117

lnprice_nol	HAC		z	P> z	[95% Conf. Interval]	
	Coef.	Std. Err.				
lnprod_nol	.5230903	.168994	3.10	0.002	.1918681	.8543124
lnrel_rese-1	-3.327062	.2348283	-14.17	0.000	-3.787317	-2.866807
lnpoil	1.796645	.2424903	7.41	0.000	1.321373	2.271918
lnco2_p	.2108295	.0901337	2.34	0.019	.0341708	.3874883
co2_d	-.8154345	.2317766	-3.52	0.000	-1.269708	-.3611606
trend	-.0008056	.0001356	-5.94	0.000	-.0010714	-.0005398
tsin	.277116	.0501592	5.52	0.000	.1788058	.3754262
tcos	.3004117	.0613002	4.90	0.000	.1802655	.4205579
lnipi	.9029908	.3840288	2.35	0.019	.1503082	1.655673
_cons	-10.80397	2.373279	-4.55	0.000	-15.45551	-6.152428

Instrumented: lnprod\_nol  
 Instruments: lnrel\_reservoir\_nol lnpoil lnco2\_p co2\_d trend tsin tcos lnipi  
 lnheatdeg\_osl lnheatdeg\_osl\_2 dsum dwkday lndlength\_osl  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(5,1449)	Prob > F
lnprod_nol	0.7906	0.7887	0.2227	66.7394	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity

Ho: variables are exogenous

HAC score chi2(1) = 15.8907 (p = 0.0001)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1452) = 14.7064 (p = 0.0001)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(4) = .213977 (p = 0.9947)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Supply NO1 hour: 6  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(9) = 487.11  
 Prob > chi2 = 0.0000  
 R-squared = 0.6356  
 Root MSE = .31492

lnprice_nol	HAC		z	P> z	[95% Conf. Interval]	
	Coef.	Std. Err.				
lnprod_nol	.4559025	.1020981	4.47	0.000	.255794	.6560111
lnrel_rese-1	-3.228075	.2240824	-14.41	0.000	-3.667268	-2.788882
lnpoil	1.71378	.2337784	7.33	0.000	1.255583	2.171977
lnco2_p	.2199156	.0868306	2.53	0.011	.0497308	.3901003
co2_d	-.8225975	.2212288	-3.72	0.000	-1.256198	-.3889971
trend	-.0007868	.0001354	-5.81	0.000	-.0010523	-.0005213
tsin	.2710666	.0487032	5.57	0.000	.1756102	.3665231
tcos	.2993804	.0489993	6.11	0.000	.2033436	.3954172
lnipi	.9061665	.386854	2.34	0.019	.1479466	1.664386
_cons	-9.945056	2.159995	-4.60	0.000	-14.17857	-5.711543

Instrumented: lnprod\_nol  
 Instruments: lnrel\_reservoir\_nol lnpoil lnco2\_p co2\_d trend tsin tcos lnipi  
 lnheatdeg\_osl lnheatdeg\_osl\_2 dsum dwkday lndlength\_osl  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(5,1449)	Prob > F
lnprod_nol	0.8228	0.8212	0.3268	120.293	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity

Ho: variables are exogenous

HAC score chi2(1) = 20.3015 (p = 0.0000)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1452) = 22.1867 (p = 0.0000)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(4) = 1.25634 (p = 0.8687)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Supply NO1 hour: 7  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(9) = 554.04  
 Prob > chi2 = 0.0000  
 R-squared = 0.6312  
 Root MSE = .31678

lnprice_nol	HAC				
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
lnprod_nol	.4505525	.0597334	7.54	0.000	.3334772 .5676277
lnrel_rese-1	-3.14694	.2191466	-14.36	0.000	-3.576459 -2.71742
lnpoil	1.667796	.2257036	7.39	0.000	1.225425 2.110167
lnco2_p	.2005585	.0824913	2.43	0.015	.0388785 .3622385
co2_d	-.7484969	.2092584	-3.58	0.000	-1.158636 -.3383579
trend	-.00076	.0001297	-5.86	0.000	-.0010142 -.0005057
tsin	.263639	.0452868	5.82	0.000	.1748784 .3523995
tcos	.2937227	.0397973	7.38	0.000	.2157214 .371724
lnipi	.8342544	.3686165	2.26	0.024	.1117793 1.55673
_cons	-9.466909	2.119321	-4.47	0.000	-13.6207 -5.313116

Instrumented: lnprod\_nol  
 Instruments: lnrel\_reservoir\_nol lnpoil lnco2\_p co2\_d trend tsin tcos lnipi  
 lnheatdeg\_osl lnheatdeg\_osl\_2 dsum dwkday lndlength\_osl  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(5,1449)	Prob > F
lnprod_nol	0.8399	0.8385	0.5524	249.678	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity

Ho: variables are exogenous

HAC score chi2(1) = 18.6378 (p = 0.0000)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1452) = 22.8629 (p = 0.0000)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(4) = .376038 (p = 0.9844)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Supply NO1 hour: 8  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(9) = 626.99  
 Prob > chi2 = 0.0000  
 R-squared = 0.6772  
 Root MSE = .27923

lnprice_nol	HAC				
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
lnprod_nol	.3702667	.0351879	10.52	0.000	.3012997 .4392338
lnrel_rese-1	-2.907995	.2015246	-14.43	0.000	-3.302976 -2.513014
lnpoil	1.59542	.2142031	7.45	0.000	1.17559 2.015251
lnco2_p	.1722442	.0826067	2.09	0.037	.0103381 .3341503
co2_d	-.6104105	.2128464	-2.87	0.004	-1.027582 -.1932392
trend	-.0007311	.0001208	-6.05	0.000	-.0009678 -.0004944
tsin	.2589149	.042906	6.03	0.000	.1748207 .343009
tcos	.2961726	.036908	8.02	0.000	.2238343 .368511
lnipi	.7974092	.3359994	2.37	0.018	.1388625 1.455956
_cons	-8.398744	1.93321	-4.34	0.000	-12.18777 -4.609721

Instrumented: lnprod\_nol  
 Instruments: lnrel\_reservoir\_nol lnpoil lnco2\_p co2\_d trend tsin tcos lnipi  
 lnheatdeg\_osl lnheatdeg\_osl\_2 dsum dwkday lndlength\_osl  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(5,1449)	Prob > F
lnprod_nol	0.8480	0.8466	0.6928	347.113	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity

Ho: variables are exogenous

HAC score chi2(1) = 16.027 (p = 0.0001)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1452) = 22.2716 (p = 0.0000)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(4) = 1.53314 (p = 0.8208)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Supply NO1 hour: 9  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(9) = 644.19  
 Prob > chi2 = 0.0000  
 R-squared = 0.6856  
 Root MSE = .26679

lnprice_nol	HAC					
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
lnprod_nol	.3780123	.0336126	11.25	0.000	.3121327	.4438918
lnrel_rese-1	-2.796934	.1952813	-14.32	0.000	-3.179678	-2.41419
lnpoil	1.550672	.2134488	7.26	0.000	1.13232	1.969024
lnco2_p	.1520293	.0905256	1.68	0.093	-.0253976	.3294561
co2_d	-.518412	.240194	-2.16	0.031	-.9891836	-.0476403
trend	-.0007369	.0001172	-6.29	0.000	-.0009667	-.0005072
tsin	.2561974	.0413803	6.19	0.000	.1750935	.3373012
tcos	.2867341	.036052	7.95	0.000	.2160735	.3573947
lnipi	.7872304	.3184192	2.47	0.013	.1631403	1.411321
_cons	-8.261131	1.880638	-4.39	0.000	-11.94711	-4.575149

Instrumented: lnprod\_nol  
 Instruments: lnrel\_reservoir\_nol lnpoil lnco2\_p co2\_d trend tsin tcos lnipi  
 lnheatdeg\_osl lnheatdeg\_osl\_2 dsum dwkday lndlength\_osl  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(5,1449)	Prob > F
lnprod_nol	0.8352	0.8337	0.6850	318.529	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity

Ho: variables are exogenous

HAC score chi2(1) = 14.8446 (p = 0.0001)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1452) = 23.3838 (p = 0.0000)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(4) = 2.66026 (p = 0.6162)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Supply NO1 hour: 10  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(9) = 587.64  
 Prob > chi2 = 0.0000  
 R-squared = 0.6971  
 Root MSE = .25343

lnprice_nol	HAC					
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
lnprod_nol	.3431004	.0373939	9.18	0.000	.2698098	.416391
lnrel_rese-1	-2.746716	.1878128	-14.62	0.000	-3.114822	-2.37861
lnpoil	1.507996	.2054384	7.34	0.000	1.105344	1.910648
lnco2_p	.1654962	.086087	1.92	0.055	-.0032313	.3342237
co2_d	-.5588987	.2276135	-2.46	0.014	-1.005013	-.1127845
trend	-.0007087	.000112	-6.33	0.000	-.0009281	-.0004893
tsin	.2495194	.0401833	6.21	0.000	.1707615	.3282772
tcos	.2799151	.0354593	7.89	0.000	.2104162	.349414
lnipi	.776299	.300402	2.58	0.010	.1875219	1.365076
_cons	-7.772698	1.802416	-4.31	0.000	-11.30537	-4.240027

Instrumented: lnprod\_nol  
 Instruments: lnrel\_reservoir\_nol lnpoil lnco2\_p co2\_d trend tsin tcos lnipi  
 lnheatdeg\_osl lnheatdeg\_osl\_2 dsum dwkday lndlength\_osl  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(5,1449)	Prob > F
lnprod_nol	0.8144	0.8128	0.6185	257.183	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity

Ho: variables are exogenous

HAC score chi2(1) = 11.7233 (p = 0.0006)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1452) = 20.4358 (p = 0.0000)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(4) = .873701 (p = 0.9283)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Supply NO1 hour: 11  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(9) = 598.42  
 Prob > chi2 = 0.0000  
 R-squared = 0.7093  
 Root MSE = .2426

lnprice_nol	HAC				
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
lnprod_nol	.2996041	.0387707	7.73	0.000	.2236149 .3755934
lnrel_rese-1	-2.706253	.1807633	-14.97	0.000	-3.060543 -2.351964
lnpoil	1.463608	.1995413	7.33	0.000	1.072514 1.854701
lnco2_p	.1915056	.0783507	2.44	0.015	.037941 .3450702
co2_d	-.6290821	.2035451	-3.09	0.002	-1.028023 -.230141
trend	-.0006837	.0001081	-6.33	0.000	-.0008955 -.0004719
tsin	.2434903	.0394888	6.17	0.000	.1660937 .3208868
tcos	.2796423	.0354964	7.88	0.000	.2100706 .349214
lnipi	.7559845	.2867515	2.64	0.008	.1939619 1.318007
_cons	-7.153695	1.700142	-4.21	0.000	-10.48591 -3.821478

Instrumented: lnprod\_nol  
 Instruments: lnrel\_reservoir\_nol lnpoil lnco2\_p co2\_d trend tsin tcos lnipi  
 HAC VCE: lnheatdeg\_osl lnheatdeg\_osl\_2 dsum dwkday lndlength\_osl  
 Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(5,1449)	Prob > F
lnprod_nol	0.8075	0.8058	0.5729	205.455	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity

Ho: variables are exogenous

HAC score chi2(1) = 10.2441 (p = 0.0014)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1452) = 18.3587 (p = 0.0000)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(4) = .632353 (p = 0.9594)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Supply NO1 hour: 12  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(9) = 615.33  
 Prob > chi2 = 0.0000  
 R-squared = 0.7148  
 Root MSE = .23996

lnprice_nol	HAC				
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
lnprod_nol	.2521827	.0416381	6.06	0.000	.1705736 .3337917
lnrel_rese-1	-2.69557	.1781697	-15.13	0.000	-3.044776 -2.346364
lnpoil	1.449087	.1982855	7.31	0.000	1.060455 1.83772
lnco2_p	.2133932	.0751464	2.84	0.005	.0661089 .3606774
co2_d	-.6896742	.1927167	-3.58	0.000	-1.067392 -.3119564
trend	-.0006759	.0001076	-6.28	0.000	-.0008868 -.000465
tsin	.2425964	.0398041	6.09	0.000	.1645818 .320611
tcos	.2865166	.0364688	7.86	0.000	.2150391 .3579941
lnipi	.7594753	.2860637	2.65	0.008	.1988007 1.32015
_cons	-6.693415	1.662323	-4.03	0.000	-9.951509 -3.435321

Instrumented: lnprod\_nol  
 Instruments: lnrel\_reservoir\_nol lnpoil lnco2\_p co2\_d trend tsin tcos lnipi  
 HAC VCE: lnheatdeg\_osl lnheatdeg\_osl\_2 dsum dwkday lndlength\_osl  
 Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(5,1449)	Prob > F
lnprod_nol	0.8035	0.8017	0.5526	183.524	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity

Ho: variables are exogenous

HAC score chi2(1) = 8.1157 (p = 0.0044)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1452) = 14.7882 (p = 0.0001)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(4) = 1.59849 (p = 0.8091)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Supply NO1 hour: 13  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(9) = 627.05  
 Prob > chi2 = 0.0000  
 R-squared = 0.7153  
 Root MSE = .23937



lnprice_nol	HAC				
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
lnprod_nol	.241446	.0398079	6.07	0.000	.1634239 .3194681
lnrel_rese-1	-2.694755	.1775221	-15.18	0.000	-3.042692 -2.346818
lnpoil	1.452036	.1979995	7.33	0.000	1.063964 1.840108
lnco2_p	.2210816	.0744461	2.97	0.003	.07517 .3669932
co2_d	-.7146568	.1896804	-3.77	0.000	-1.086423 -.3428901
trend	-.0006747	.0001074	-6.28	0.000	-.0008853 -.0004641
tsin	.2416841	.0396221	6.10	0.000	.1640263 .3193419
tcos	.2873774	.0364155	7.89	0.000	.2160043 .3587504
lnipi	.7629761	.28691	2.66	0.008	.2006428 1.325309
_cons	-6.624738	1.657338	-4.00	0.000	-9.873061 -3.376416

Instrumented: lnprod\_nol  
 Instruments: lnrel\_reservoir\_nol lnpoil lnco2\_p co2\_d trend tsin tcos lnipi  
 lnheatdeg\_osl lnheatdeg\_osl\_2 dsum dwkday lndlength\_osl  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(5,1449)	Prob > F
lnprod_nol	0.8073	0.8056	0.5648	190.095	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity

Ho: variables are exogenous

HAC score chi2(1) = 8.47068 (p = 0.0036)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1452) = 15.4736 (p = 0.0001)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(4) = 2.04017 (p = 0.7284)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Supply NO1 hour: 14  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(9) = 658.45  
 Prob > chi2 = 0.0000  
 R-squared = 0.7120  
 Root MSE = .24256

lnprice_nol	HAC				
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
lnprod_nol	.2573021	.0369775	6.96	0.000	.1848275 .3297768
lnrel_rese-1	-2.717146	.1796993	-15.12	0.000	-3.06935 -2.364942
lnpoil	1.453715	.2004024	7.25	0.000	1.060934 1.846497
lnco2_p	.2314892	.0746071	3.10	0.002	.085262 .3777163
co2_d	-.749273	.189656	-3.95	0.000	-1.120992 -.377554
trend	-.0006767	.0001085	-6.24	0.000	-.0008894 -.000464
tsin	.2403314	.0398496	6.03	0.000	.1622276 .3184353
tcos	.2873486	.0363849	7.90	0.000	.2160355 .3586617
lnipi	.7644695	.2896605	2.64	0.008	.1967453 1.332194
_cons	-6.782827	1.681924	-4.03	0.000	-10.07934 -3.486318

Instrumented: lnprod\_nol  
 Instruments: lnrel\_reservoir\_nol lnpoil lnco2\_p co2\_d trend tsin tcos lnipi  
 lnheatdeg\_osl lnheatdeg\_osl\_2 dsum dwkday lndlength\_osl  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(5,1449)	Prob > F
lnprod_nol	0.8092	0.8075	0.5929	208.699	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity

Ho: variables are exogenous

HAC score chi2(1) = 8.45773 (p = 0.0036)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1452) = 14.914 (p = 0.0001)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(4) = 1.90515 (p = 0.7532)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Supply NO1 hour: 15  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(9) = 664.80  
 Prob > chi2 = 0.0000  
 R-squared = 0.7144  
 Root MSE = .24289

lnprice_nol	HAC				
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
lnprod_nol	.2577006	.0346839	7.43	0.000	.1897213 .3256799
lnrel_rese-1	-2.735162	.1808851	-15.12	0.000	-3.08969 -2.380633
lnpoil	1.471893	.2004405	7.34	0.000	1.079037 1.86475
lnco2_p	.2388104	.0751724	3.18	0.001	.0914753 .3861455
co2_d	-.7750289	.190986	-4.06	0.000	-1.149355 -.4007031
trend	-.0006824	.0001091	-6.25	0.000	-.0008963 -.0004686
tsin	.241779	.0398793	6.06	0.000	.163617 .319941
tcos	.2910592	.0364828	7.98	0.000	.2195542 .3625641
lnipi	.754753	.2919233	2.59	0.010	.1825938 1.326912
_cons	-6.800119	1.704251	-3.99	0.000	-10.14039 -3.459848

Instrumented: lnprod\_nol  
 Instruments: lnrel\_reservoir\_nol lnpoil lnco2\_p co2\_d trend tsin tcos lnipi  
 HAC VCE: lnheatdeg\_osl lnheatdeg\_osl\_2 dsum dwkday lndlength\_osl  
 Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(5,1449)	Prob > F
lnprod_nol	0.8086	0.8069	0.5982	222.531	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity

Ho: variables are exogenous

HAC score chi2(1) = 8.81266 (p = 0.0030)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1452) = 15.5898 (p = 0.0001)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(4) = 1.5474 (p = 0.8182)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Supply NO1 hour: 16  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(9) = 639.98  
 Prob > chi2 = 0.0000  
 R-squared = 0.7067  
 Root MSE = .2492

lnprice_nol	HAC				
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
lnprod_nol	.2648909	.0390514	6.78	0.000	.1883515 .3414304
lnrel_rese-1	-2.75774	.1850364	-14.90	0.000	-3.120405 -2.395076
lnpoil	1.453191	.2056666	7.07	0.000	1.050092 1.85629
lnco2_p	.2524241	.07602	3.32	0.001	.1034277 .4014205
co2_d	-.8114554	.1928544	-4.21	0.000	-1.189443 -.4334678
trend	-.0006827	.0001115	-6.12	0.000	-.0009012 -.0004641
tsin	.2417042	.0408573	5.92	0.000	.1616253 .321783
tcos	.2958668	.0375564	7.88	0.000	.2222576 .3694759
lnipi	.7572704	.2967201	2.55	0.011	.1757097 1.338831
_cons	-6.812472	1.74675	-3.90	0.000	-10.23604 -3.388905

Instrumented: lnprod\_nol  
 Instruments: lnrel\_reservoir\_nol lnpoil lnco2\_p co2\_d trend tsin tcos lnipi  
 HAC VCE: lnheatdeg\_osl lnheatdeg\_osl\_2 dsum dwkday lndlength\_osl  
 Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(5,1449)	Prob > F
lnprod_nol	0.8129	0.8113	0.5781	203.4	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity

Ho: variables are exogenous

HAC score chi2(1) = 9.264 (p = 0.0023)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1452) = 15.561 (p = 0.0001)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(4) = 1.48287 (p = 0.8297)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Supply NO1 hour: 17  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(9) = 591.05  
 Prob > chi2 = 0.0000  
 R-squared = 0.7064  
 Root MSE = .2501

lnprice_nol	HAC				
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
lnprod_nol	.2667356	.047987	5.56	0.000	.1726827 .3607884
lnrel_rese-1	-2.761498	.1860904	-14.84	0.000	-3.126229 -2.396768
lnpoil	1.431468	.2064027	6.94	0.000	1.026927 1.83601
lnco2_p	.2617259	.0762448	3.43	0.001	.112289 .4111629
co2_d	-.8300199	.1929582	-4.30	0.000	-1.208211 -.4518287
trend	-.0006825	.0001125	-6.07	0.000	-.0009029 -.0004621
tsin	.2412014	.0409856	5.89	0.000	.1608711 .3215318
tcos	.300581	.0393081	7.65	0.000	.2235385 .3776235
lnipi	.7489229	.2995641	2.50	0.012	.1617881 1.336058
_cons	-6.712164	1.782826	-3.76	0.000	-10.20644 -3.21789

Instrumented: lnprod\_nol  
 Instruments: lnrel\_reservoir\_nol lnpoil lnco2\_p co2\_d trend tsin tcos lnipi  
 HAC VCE: lnheatdeg\_osl lnheatdeg\_osl\_2 dsum dwkday lndlength\_osl  
 Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(5,1449)	Prob > F
lnprod_nol	0.8239	0.8224	0.5243	157.309	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity

Ho: variables are exogenous

HAC score chi2(1) = 10.6211 (p = 0.0011)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1452) = 17.2205 (p = 0.0000)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(4) = 1.198 (p = 0.8784)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Supply NO1 hour: 18  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(9) = 542.59  
 Prob > chi2 = 0.0000  
 R-squared = 0.7026  
 Root MSE = .2521

lnprice_nol	HAC				
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
lnprod_nol	.25451	.0589318	4.32	0.000	.1390058 .3700142
lnrel_rese-1	-2.749558	.1861494	-14.77	0.000	-3.114404 -2.384712
lnpoil	1.408145	.2089346	6.74	0.000	.9986405 1.817649
lnco2_p	.2442903	.077539	3.15	0.002	.0923166 .396264
co2_d	-.770471	.1968242	-3.91	0.000	-1.156239 -.3847027
trend	-.0006787	.0001138	-5.96	0.000	-.0009018 -.0004556
tsin	.2438288	.0414545	5.88	0.000	.1625794 .3250782
tcos	.3051808	.0422658	7.22	0.000	.2223413 .3880203
lnipi	.7593893	.3045993	2.49	0.013	.1623857 1.356393
_cons	-6.564855	1.807424	-3.63	0.000	-10.10734 -3.022369

Instrumented: lnprod\_nol  
 Instruments: lnrel\_reservoir\_nol lnpoil lnco2\_p co2\_d trend tsin tcos lnipi  
 HAC VCE: lnheatdeg\_osl lnheatdeg\_osl\_2 dsum dwkday lndlength\_osl  
 Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(5,1449)	Prob > F
lnprod_nol	0.8360	0.8345	0.4640	116.439	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity

Ho: variables are exogenous

HAC score chi2(1) = 10.3645 (p = 0.0013)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1452) = 17.9394 (p = 0.0000)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(4) = .294333 (p = 0.9902)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Supply NO1 hour: 19  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(9) = 522.83  
 Prob > chi2 = 0.0000  
 R-squared = 0.7060  
 Root MSE = .24915

lnprice_nol	HAC				
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
lnprod_nol	.2155677	.0657596	3.28	0.001	.0866813 .3444541
lnrel_rese-1	-2.71193	.1806826	-15.01	0.000	-3.066061 -2.357798
lnpoil	1.474174	.2065748	7.14	0.000	1.069295 1.879053
lnco2_p	.1909771	.0798377	2.39	0.017	.034498 .3474561
co2_d	-.6216728	.2043517	-3.04	0.002	-1.022195 -.2211508
trend	-.0006958	.0001133	-6.14	0.000	-.0009178 -.0004739
tsin	.247961	.0412	6.02	0.000	.1672104 .3287115
tcos	.3077643	.0437046	7.04	0.000	.2221049 .3934238
lnipi	.7963944	.3093981	2.57	0.010	.1899854 1.402804
_cons	-6.590612	1.773057	-3.72	0.000	-10.06574 -3.115484

Instrumented: lnprod\_nol  
 Instruments: lnrel\_reservoir\_nol lnpoil lnco2\_p co2\_d trend tsin tcos lnipi  
 lnheatdeg\_osl lnheatdeg\_osl\_2 dsum dwkday lndlength\_osl  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(5,1449)	Prob > F
lnprod_nol	0.8432	0.8418	0.4137	100.947	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity

Ho: variables are exogenous

HAC score chi2(1) = 9.3283 (p = 0.0023)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1452) = 16.5244 (p = 0.0001)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(4) = .426823 (p = 0.9802)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Supply NO1 hour: 20  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(9) = 550.20  
 Prob > chi2 = 0.0000  
 R-squared = 0.7077  
 Root MSE = .24807

lnprice_nol	HAC				
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
lnprod_nol	.1883353	.0665879	2.83	0.005	.0578254 .3188452
lnrel_rese-1	-2.699157	.1782084	-15.15	0.000	-3.048439 -2.349875
lnpoil	1.504375	.2058514	7.31	0.000	1.100914 1.907836
lnco2_p	.1891674	.0769059	2.46	0.014	.0384346 .3399003
co2_d	-.6229358	.195862	-3.18	0.001	-1.006818 -.2290532
trend	-.0007031	.0001138	-6.18	0.000	-.0009262 -.00048
tsin	.2473469	.0412111	6.00	0.000	.1665746 .3281192
tcos	.3081929	.0430812	7.15	0.000	.2237553 .3926305
lnipi	.8254393	.3132007	2.64	0.008	.2115773 1.439301
_cons	-6.575356	1.710899	-3.84	0.000	-9.928657 -3.222056

Instrumented: lnprod\_nol  
 Instruments: lnrel\_reservoir\_nol lnpoil lnco2\_p co2\_d trend tsin tcos lnipi  
 lnheatdeg\_osl lnheatdeg\_osl\_2 dsum dwkday lndlength\_osl  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(5,1449)	Prob > F
lnprod_nol	0.8386	0.8371	0.3846	112.455	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity

Ho: variables are exogenous

HAC score chi2(1) = 8.22376 (p = 0.0041)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1452) = 13.6082 (p = 0.0002)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(4) = .886553 (p = 0.9265)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Supply NO1 hour: 21  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(9) = 528.58  
 Prob > chi2 = 0.0000  
 R-squared = 0.7020  
 Root MSE = .25025

lnprice_nol	HAC				
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
lnprod_nol	.1730109	.0755166	2.29	0.022	.025001 .3210208
lnrel_rese-1	-2.69777	.1804226	-14.95	0.000	-3.051392 -2.344149
lnpoil	1.503277	.2091709	7.19	0.000	1.09331 1.913244
lnco2_p	.2101738	.0760981	2.76	0.006	.0610243 .3593233
co2_d	-.6883283	.1937743	-3.55	0.000	-1.068119 -.3085377
trend	-.0006995	.0001157	-6.04	0.000	-.0009264 -.0004727
tsin	.2465713	.0419373	5.88	0.000	.1643758 .3287669
tcos	.3065754	.0423054	7.25	0.000	.2236583 .3894924
lnipi	.8247188	.3160748	2.61	0.009	.2052236 1.444214
_cons	-6.434426	1.698841	-3.79	0.000	-9.764092 -3.104759

Instrumented: lnprod\_nol  
 Instruments: lnrel\_reservoir\_nol lnpoil lnco2\_p co2\_d trend tsin tcos lnipi  
 lnheatdeg\_osl lnheatdeg\_osl\_2 dsum dwkday lndlength\_osl  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(5,1449)	Prob > F
lnprod_nol	0.8194	0.8178	0.3462	122.434	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
 Ho: variables are exogenous

HAC score chi2(1) = 5.72434 (p = 0.0167)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1452) = 8.97312 (p = 0.0028)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(4) = 1.79041 (p = 0.7742)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Supply NO1 hour: 22  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(9) = 495.88  
 Prob > chi2 = 0.0000  
 R-squared = 0.6995  
 Root MSE = .2494

lnprice_nol	HAC				
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
lnprod_nol	.1827605	.0865315	2.11	0.035	.0131619 .3523592
lnrel_rese-1	-2.703873	.1914393	-14.12	0.000	-3.079087 -2.328659
lnpoil	1.497135	.2075375	7.21	0.000	1.090369 1.903901
lnco2_p	.2164711	.0767263	2.82	0.005	.0660904 .3668519
co2_d	-.7088127	.1966424	-3.60	0.000	-1.094225 -.3234006
trend	-.0006953	.0001143	-6.09	0.000	-.0009193 -.0004714
tsin	.2471312	.0418952	5.90	0.000	.1650181 .3292444
tcos	.3016297	.0406618	7.42	0.000	.221934 .3813254
lnipi	.7983879	.3042451	2.62	0.009	.2020784 1.394697
_cons	-6.384316	1.762532	-3.62	0.000	-9.838815 -2.929817

Instrumented: lnprod\_nol  
 Instruments: lnrel\_reservoir\_nol lnpoil lnco2\_p co2\_d trend tsin tcos lnipi  
 lnheatdeg\_osl lnheatdeg\_osl\_2 dsum dwkday lndlength\_osl  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(5,1449)	Prob > F
lnprod_nol	0.8053	0.8036	0.3078	110.888	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
 Ho: variables are exogenous

HAC score chi2(1) = 4.19962 (p = 0.0404)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1452) = 6.14614 (p = 0.0133)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(4) = .832735 (p = 0.9340)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Supply NO1 hour: 23  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(9) = 508.40  
 Prob > chi2 = 0.0000  
 R-squared = 0.6943  
 Root MSE = .25513

lnprice_nol	HAC					
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
lnprod_nol	.1875991	.1114361	1.68	0.092	-.0308116	.4060099
lnrel_rese-1	-2.743641	.2029024	-13.52	0.000	-3.141322	-2.34596
lnpoil	1.523068	.2115803	7.20	0.000	1.108378	1.937757
lnco2_p	.2283102	.0781236	2.92	0.003	.0751908	.3814296
co2_d	-.7495437	.2008757	-3.73	0.000	-1.143253	-.3558345
trend	-.0007153	.0001185	-6.04	0.000	-.0009475	-.0004831
tsin	.2522559	.0436899	5.77	0.000	.1666253	.3378865
tcos	.3018277	.0422075	7.15	0.000	.2191025	.384553
lnipi	.8442924	.3190727	2.65	0.008	.2189214	1.469663
_cons	-6.70688	1.968833	-3.41	0.001	-10.56572	-2.848039

Instrumented: lnprod\_nol  
 Instruments: lnrel\_reservoir\_nol lnpoil lnco2\_p co2\_d trend tsin tcos lnipi  
 lnheatdeg\_osl lnheatdeg\_osl\_2 dsum dwkday lndlength\_osl  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(5,1449)	Prob > F
lnprod_nol	0.7949	0.7931	0.2649	81.047	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
 Ho: variables are exogenous

HAC score chi2(1) = 3.50128 (p = 0.0613)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1452) = 4.85921 (p = 0.0277)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(4) = .904517 (p = 0.9239)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Supply NOL hour: 24  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(9) = 493.33  
 Prob > chi2 = 0.0000  
 R-squared = 0.6778  
 Root MSE = .26715

lnprice_nol	HAC					
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
lnprod_nol	.3000935	.1483949	2.02	0.043	.009245	.5909421
lnrel_rese-1	-2.883407	.2297708	-12.55	0.000	-3.33375	-2.433065
lnpoil	1.591505	.2190259	7.27	0.000	1.162222	2.020788
lnco2_p	.2356614	.0800381	2.94	0.003	.0787896	.3925333
co2_d	-.8107786	.2079663	-3.90	0.000	-1.218385	-.4031721
trend	-.0007422	.0001235	-6.01	0.000	-.0009843	-.0005001
tsin	.2547002	.0449711	5.66	0.000	.1665585	.3428419
tcos	.2930887	.0448876	6.53	0.000	.2051106	.3810667
lnipi	.8699568	.3416714	2.55	0.011	.2002933	1.53962
_cons	-8.038309	2.297017	-3.50	0.000	-12.54038	-3.536239

Instrumented: lnprod\_nol  
 Instruments: lnrel\_reservoir\_nol lnpoil lnco2\_p co2\_d trend tsin tcos lnipi  
 lnheatdeg\_osl lnheatdeg\_osl\_2 dsum dwkday lndlength\_osl  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(5,1449)	Prob > F
lnprod_nol	0.7921	0.7902	0.2186	54.1273	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
 Ho: variables are exogenous

HAC score chi2(1) = 6.45603 (p = 0.0111)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1452) = 7.91572 (p = 0.0050)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(4) = 1.18737 (p = 0.8802)  
 (Prewhitening performed with 1 lag)

```

108
109
110 forvalues h = 1/24 {
2.   di _newline
3.   di "*****"
4.   di "*" Demand NOL hour: " `h' "
5.   di "*****"
6.   di _newline
7.
111 preserve
8.   keep if hour=="`h'" & idz
9.   sort date
10.  tsset date, daily
11.  tsreport, report report0 list
12.
    
```

```

112 ivregress 2sls lncons_nol lnheatdeg_osl lnheatdeg_osl_2 dsumm dwkday lnpoil tre
> nd tsin tcos lnipi lndlength_osl ///
> (lnprice_nol = lnrel_reservoir_nol lnco2_p co2_d), ///
> vce(hac bartlett 7)
13.
113 di _newline
14. estat first
15.
114 di _newline
16. estat endog
17.
115 di _newline
18. estat overid
19.
116 restore
20. }

```

\*\*\*\*\*  
\* Demand N01 hour: 1  
\*\*\*\*\*

(33649 observations deleted)  
time variable: **date**, 12.04.2004 to 13.04.2008  
delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression                      Number of obs = **1463**  
Wald chi2(11) = **9396.05**  
Prob > chi2 = **0.0000**  
R-squared = **0.9565**  
Root MSE = **.04271**

lncons_nol	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
lnprice_nol	-.0452566	.0070791	-6.39	0.000	-.0591315	-.0313818
lnheatdeg_~1	-.0917265	.0075974	-12.07	0.000	-.1066171	-.076836
lnheatdeg_~2	.0539115	.0025546	21.10	0.000	.0489046	.0589185
dsumm	-.0022081	.010831	-0.20	0.838	-.0234365	.0190204
dwkday	.0070103	.0022776	3.08	0.002	.0025463	.0114744
lnpoil	.1732184	.0212453	8.15	0.000	.1315784	.2148583
trend	-.0000576	.0000132	-4.38	0.000	-.0000834	-.0000318
tsin	.0711712	.0052743	13.49	0.000	.0608338	.0815087
tcos	.1045886	.0235872	4.43	0.000	.0583585	.1508187
lnipi	.129446	.034245	3.78	0.000	.0623271	.196565
lndlength_~1	-.0674714	.0446363	-1.51	0.131	-.1549569	.0200141
_cons	8.118029	.1733959	46.82	0.000	7.778179	8.457879

Instrumented: lnprice\_nol  
Instruments: lnheatdeg\_osl lnheatdeg\_osl\_2 dsumm dwkday lnpoil trend tsin tcos  
lnipi lndlength\_osl lnrel\_reservoir\_nol lnco2\_p co2\_d  
HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(3,1449)	Prob > F
lnprice_nol	<b>0.6950</b>	<b>0.6923</b>	<b>0.5931</b>	<b>62.1523</b>	<b>0.0000</b>

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
Ho: variables are exogenous

HAC score chi2(1) = **28.5351** (p = 0.0000)  
(Prewhitening performed with 1 lag)

HAC regression F(1,1450) = **41.883** (p = 0.0000)  
(Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(2) = **4.08366** (p = 0.1298)  
(Prewhitening performed with 1 lag)

\*\*\*\*\*  
\* Demand N01 hour: 2  
\*\*\*\*\*

(33649 observations deleted)  
time variable: **date**, 12.04.2004 to 13.04.2008  
delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression                      Number of obs = **1463**  
Wald chi2(11) = **9408.68**  
Prob > chi2 = **0.0000**  
R-squared = **0.9563**  
Root MSE = **.04404**

lncons_nol	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
lnprice_nol	-.0446381	.0072649	-6.14	0.000	-.0588771	-.0303991
lnheatdeg_~1	-.1035251	.0085994	-12.04	0.000	-.1203795	-.0866707
lnheatdeg_~2	.0566953	.0027134	20.89	0.000	.0513772	.0620135
dsumm	-.0013866	.0116885	-0.12	0.906	-.0242958	.0215225
dwkday	.007724	.0021591	3.58	0.000	.0034921	.0119558
lnpoil	.1820104	.0225324	8.08	0.000	.1378476	.2261731
trend	-.000062	.0000139	-4.45	0.000	-.0000892	-.0000347
tsin	.069071	.0055806	12.38	0.000	.0581332	.0800087
tcos	.1346111	.02422	5.56	0.000	.0871409	.1820813
lnipi	.120559	.0362671	3.32	0.001	.0494767	.1916412
lndlength_~1	-.0324937	.0461962	-0.70	0.482	-.1230366	.0580491
_cons	8.02084	.1823664	43.98	0.000	7.663408	8.378271

Instrumented: lnprice\_nol  
Instruments: lnheatdeg\_osl lnheatdeg\_osl\_2 dsumm dwkday lnpoil trend tsin tcos  
lnipi lndlength\_osl lnrel\_reservoir\_nol lnco2\_p co2\_d  
HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(3,1449)	Prob > F
lnprice_nol	<b>0.6827</b>	<b>0.6799</b>	<b>0.5756</b>	<b>61.919</b>	<b>0.0000</b>

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
Ho: variables are exogenous

HAC score chi2(1) = **29.0228** (p = 0.0000)  
(Prewhitening performed with 1 lag)

HAC regression F(1,1450) = **43.4299** (p = 0.0000)  
(Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(2) = 4.55946 (p = 0.1023)  
(Prewhitening performed with 1 lag)

\*\*\*\*\*  
\* Demand NO1 hour: 3  
\*\*\*\*\*

(33649 observations deleted)  
time variable: date, 12.04.2004 to 13.04.2008  
delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
Number of obs = 1463  
Wald chi2(11) = 9101.96  
Prob > chi2 = 0.0000  
R-squared = 0.9536  
Root MSE = .04611

lncons_nol	Coef.	HAC Std. Err.	z	P> z	[95% Conf. Interval]	
lnprice_nol	-.0421618	.0075382	-5.59	0.000	-.0569365	-.0273872
lnheatdeg_~1	-.1093189	.0099287	-11.01	0.000	-.1287789	-.0898589
lnheatdeg_~2	.0576121	.0029683	19.41	0.000	.0517943	.0634298
dsumm	-.0034951	.0120644	-0.29	0.772	-.0271409	.0201506
dwkday	.0110828	.0022093	5.02	0.000	.0067526	.015413
lnpoil	.1836673	.0237067	7.75	0.000	.137203	.2301316
trend	-.000062	.0000148	-4.20	0.000	-.000091	-.0000331
tsin	.0666837	.0058564	11.39	0.000	.0552054	.078162
tcos	.1614797	.0249892	6.46	0.000	.1125017	.2104577
lnipi	.1119997	.0378823	2.96	0.003	.0377518	.1862476
lndlength_~1	.0041295	.0478296	0.09	0.931	-.0896148	.0978739
_cons	7.945213	.1884027	42.17	0.000	7.57595	8.314475

Instrumented: lnprice\_nol  
Instruments: lnheatdeg\_os1 lnheatdeg\_os1\_2 dsumm dwkday lnpoil trend tsin tcos  
lnipi lndlength\_os1 lnrel\_reservoir\_nol lnco2\_p co2\_d  
HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(3,1449)	Prob > F
lnprice_nol	0.6682	0.6652	0.5595	62.7968	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
Ho: variables are exogenous

HAC score chi2(1) = 27.9761 (p = 0.0000)  
(Prewhitening performed with 1 lag)

HAC regression F(1,1450) = 38.6482 (p = 0.0000)  
(Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(2) = 3.59734 (p = 0.1655)  
(Prewhitening performed with 1 lag)

\*\*\*\*\*  
\* Demand NO1 hour: 4  
\*\*\*\*\*

(33649 observations deleted)  
time variable: date, 12.04.2004 to 13.04.2008  
delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
Number of obs = 1463  
Wald chi2(11) = 9355.19  
Prob > chi2 = 0.0000  
R-squared = 0.9533  
Root MSE = .04683

lncons_nol	Coef.	HAC Std. Err.	z	P> z	[95% Conf. Interval]	
lnprice_nol	-.0418974	.0075043	-5.58	0.000	-.0566056	-.0271892
lnheatdeg_~1	-.1227688	.0118471	-10.36	0.000	-.1459888	-.0995488
lnheatdeg_~2	.0600044	.0033269	18.04	0.000	.0534838	.0665249
dsumm	-.0047519	.0118845	-0.40	0.689	-.0280452	.0185413
dwkday	.0177138	.0022169	7.99	0.000	.0133688	.0220588
lnpoil	.1844872	.023838	7.74	0.000	.1377656	.2312088
trend	-.0000628	.0000149	-4.23	0.000	-.0000919	-.0000337
tsin	.0659066	.0059945	10.99	0.000	.0541576	.0776557
tcos	.1857431	.0257874	7.20	0.000	.1352006	.2362855
lnipi	.1119315	.0383846	2.92	0.004	.036699	.1871639
lndlength_~1	.0358029	.0494706	0.72	0.469	-.0611576	.1327635
_cons	7.870661	.1927613	40.83	0.000	7.492856	8.248467

Instrumented: lnprice\_nol  
Instruments: lnheatdeg\_os1 lnheatdeg\_os1\_2 dsumm dwkday lnpoil trend tsin tcos  
lnipi lndlength\_os1 lnrel\_reservoir\_nol lnco2\_p co2\_d  
HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(3,1449)	Prob > F
lnprice_nol	0.6594	0.6564	0.5500	65.3438	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
Ho: variables are exogenous

HAC score chi2(1) = 25.4296 (p = 0.0000)  
(Prewhitening performed with 1 lag)

HAC regression F(1,1450) = 39.4295 (p = 0.0000)  
(Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(2) = 4.14186 (p = 0.1261)  
(Prewhitening performed with 1 lag)

\*\*\*\*\*  
\* Demand NO1 hour: 5  
\*\*\*\*\*



(33649 observations deleted)  
 time variable: **date, 12.04.2004 to 13.04.2008**  
 delta: **1 day**

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = **1463**  
 Wald chi2(11) = **9639.41**  
 Prob > chi2 = **0.0000**  
 R-squared = **0.9549**  
 Root MSE = **.04755**

lncons_nol	Coef.	HAC Std. Err.	z	P> z	[95% Conf. Interval]	
lnprice_nol	-.0432786	.0075762	-5.71	0.000	-.0581276	-.0284295
lnheatdeg_~1	-.1262375	.012791	-9.87	0.000	-.1513075	-.1011675
lnheatdeg_~2	.0604091	.0034184	17.67	0.000	.0537092	.067109
dsum	-.0116057	.0120289	-0.96	0.335	-.0351819	.0119705
dwkday	.030562	.0022209	13.76	0.000	.0262092	.0349148
lnpoil	.1937374	.0242658	7.98	0.000	.1461772	.2412976
trend	-.0000638	.0000152	-4.18	0.000	-.0000936	-.0000339
tsin	.0595698	.0061157	9.74	0.000	.0475833	.0715563
tcos	.2349379	.0264696	8.88	0.000	.1830585	.2868174
lnipi	.0893959	.0393198	2.27	0.023	.0123305	.1664613
lnlength_~1	.1027692	.0506942	2.03	0.043	.0034103	.202128
_cons	7.780327	.1987423	39.15	0.000	7.390799	8.169854

Instrumented: lnprice\_nol  
 Instruments: lnheatdeg\_osl lnheatdeg\_osl\_2 dsum dwkday lnpoil trend tsin tcos  
 lnipi lnlength\_osl lnrel\_reservoir\_nol lnco2\_p co2\_d  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(3,1449)	Prob > F
lnprice_nol	<b>0.6729</b>	<b>0.6700</b>	<b>0.5611</b>	<b>68.8071</b>	<b>0.0000</b>

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
 Ho: variables are exogenous

HAC score chi2(1) = **27.4054** (p = 0.0000)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1450) = **36.8263** (p = 0.0000)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(2) = **4.97105** (p = 0.0833)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Demand N01 hour: 6  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: **date, 12.04.2004 to 13.04.2008**  
 delta: **1 day**

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = **1463**  
 Wald chi2(11) = **9469.62**  
 Prob > chi2 = **0.0000**  
 R-squared = **0.9560**  
 Root MSE = **.04869**

lncons_nol	Coef.	HAC Std. Err.	z	P> z	[95% Conf. Interval]	
lnprice_nol	-.0488946	.0080852	-6.05	0.000	-.0647413	-.033048
lnheatdeg_~1	-.1219711	.0128614	-9.48	0.000	-.1471791	-.0967632
lnheatdeg_~2	.0593685	.0033444	17.75	0.000	.0528136	.0659233
dsum	-.0115704	.0137532	-0.84	0.400	-.0385262	.0153854
dwkday	.0587398	.0024128	24.34	0.000	.0540107	.0634688
lnpoil	.2080584	.0242913	8.57	0.000	.1604484	.2556684
trend	-.0000779	.0000154	-5.06	0.000	-.0001081	-.0000478
tsin	.0613223	.0062415	9.82	0.000	.0490892	.0735553
tcos	.2411256	.0267162	9.03	0.000	.1887629	.2934884
lnipi	.166326	.0396554	4.19	0.000	.0886029	.2440491
lnlength_~1	.1013561	.0507662	2.00	0.046	.0018562	.200856
_cons	7.410189	.2000424	37.04	0.000	7.018113	7.802265

Instrumented: lnprice\_nol  
 Instruments: lnheatdeg\_osl lnheatdeg\_osl\_2 dsum dwkday lnpoil trend tsin tcos  
 lnipi lnlength\_osl lnrel\_reservoir\_nol lnco2\_p co2\_d  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(3,1449)	Prob > F
lnprice_nol	<b>0.6692</b>	<b>0.6662</b>	<b>0.5547</b>	<b>64.5677</b>	<b>0.0000</b>

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
 Ho: variables are exogenous

HAC score chi2(1) = **34.6225** (p = 0.0000)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1450) = **45.809** (p = 0.0000)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(2) = **4.50488** (p = 0.1051)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Demand N01 hour: 7  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: **date, 12.04.2004 to 13.04.2008**  
 delta: **1 day**

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = **1463**  
 Wald chi2(11) = **11653.19**  
 Prob > chi2 = **0.0000**  
 R-squared = **0.9587**  
 Root MSE = **.04865**

lncons_nol	HAC				
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
lnprice_nol	-.0464271	.007739	-6.00	0.000	-.0615954 -.0312589
lnheatdeg_~1	-.0991237	.0111108	-8.92	0.000	-.1209005 -.0773469
lnheatdeg_~2	.0540206	.0029756	18.15	0.000	.0481886 .0598526
dsummm	-.0191741	.0121291	-1.58	0.114	-.0429467 .0045986
dwkday	.1296274	.0028466	45.54	0.000	.1240481 .1352067
lnpoil	.1994582	.023146	8.62	0.000	.1540928 .2448235
trend	-.0000753	.0000149	-5.05	0.000	-.0001045 -.0000461
tsin	.0657839	.0058653	11.22	0.000	.0542881 .0772796
tcos	.2169382	.0268102	8.09	0.000	.1643912 .2694852
lnipi	.2273681	.0369501	6.15	0.000	.1549472 .299789
lnlength_~1	.0647141	.050332	1.29	0.199	-.0339349 .1633631
_cons	7.232075	.1954951	36.99	0.000	6.848912 7.615239

Instrumented: lnprice\_nol  
 Instruments: lnheatdeg\_osl lnheatdeg\_osl\_2 dsummm dwkday lnpoil trend tsin tcos  
 lnipi lnlength\_osl lnrel\_reservoir\_nol lnco2\_p co2\_d  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(3,1449)	Prob > F
lnprice_nol	0.6584	0.6554	0.5434	69.5692	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
 Ho: variables are exogenous

HAC score chi2(1) = 39.2846 (p = 0.0000)  
 (Prewhitening performed with 1 lag)  
 HAC regression F(1,1450) = 42.3319 (p = 0.0000)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(2) = 3.38671 (p = 0.1839)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Demand NOL hour: 8  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(11) = 14318.57  
 Prob > chi2 = 0.0000  
 R-squared = 0.9590  
 Root MSE = .04977

lncons_nol	HAC				
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
lnprice_nol	-.0448742	.0079141	-5.67	0.000	-.0603856 -.0293629
lnheatdeg_~1	-.073013	.0092841	-7.86	0.000	-.0912095 -.0548164
lnheatdeg_~2	.0485028	.0026972	17.98	0.000	.0432164 .0537892
dsummm	-.0412094	.0114214	-3.61	0.000	-.063595 -.0188238
dwkday	.2097883	.0034416	60.96	0.000	.2030429 .2165337
lnpoil	.1901415	.0222826	8.53	0.000	.1464684 .2338147
trend	-.0000761	.000015	-5.08	0.000	-.0001054 -.0000467
tsin	.0681692	.0056275	12.11	0.000	.0571394 .079199
tcos	.1676938	.0278802	6.01	0.000	.1130496 .222338
lnipi	.2467999	.0377821	6.53	0.000	.1727482 .3208515
lnlength_~1	.002698	.0517254	0.05	0.958	-.098682 .104078
_cons	7.33508	.2169911	33.80	0.000	6.909785 7.760374

Instrumented: lnprice\_nol  
 Instruments: lnheatdeg\_osl lnheatdeg\_osl\_2 dsummm dwkday lnpoil trend tsin tcos  
 lnipi lnlength\_osl lnrel\_reservoir\_nol lnco2\_p co2\_d  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(3,1449)	Prob > F
lnprice_nol	0.6978	0.6951	0.5864	71.3409	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
 Ho: variables are exogenous

HAC score chi2(1) = 35.1835 (p = 0.0000)  
 (Prewhitening performed with 1 lag)  
 HAC regression F(1,1450) = 37.8251 (p = 0.0000)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(2) = 4.43178 (p = 0.1091)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Demand NOL hour: 9  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(11) = 14130.53  
 Prob > chi2 = 0.0000  
 R-squared = 0.9578  
 Root MSE = .04885

lncons_nol	HAC				
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
lnprice_nol	-.0468004	.0079824	-5.86	0.000	-.0624456 -.0311553
lnheatdeg_1	-.0689102	.0077025	-8.95	0.000	-.0840068 -.0538136
lnheatdeg_2	.0482379	.002518	19.16	0.000	.0433028 .053173
dsummm	-.0466247	.012101	-3.85	0.000	-.0703423 -.0229071
dwkday	.2043039	.0031953	63.94	0.000	.1980412 .2105667
lnpoil	.1847884	.0223782	8.26	0.000	.1409279 .2286489
tsin	-.0000734	.000015	-4.91	0.000	-.0001027 -.0000441
tcos	.0713882	.0055137	12.95	0.000	.0605816 .0821948
lnipi	.2219776	.0360142	6.16	0.000	.151391 .2925642
lnlength_1	-.0455416	.0517152	-0.88	0.379	-.1469015 .0558183
_cons	7.62966	.2173864	35.10	0.000	7.203591 8.05573

Instrumented: lnprice\_nol  
 Instruments: lnheatdeg\_osl lnheatdeg\_osl\_2 dsummm dwkday lnpoil trend tsin tcos  
 lnipi lnlength\_osl lnrel\_reservoir\_nol lnco2\_p co2\_d  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(3,1449)	Prob > F
lnprice_nol	0.7050	0.7023	0.5925	69.2952	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
 Ho: variables are exogenous

HAC score chi2(1) = 40.1239 (p = 0.0000)  
 (Prewhitening performed with 1 lag)  
 HAC regression F(1,1450) = 40.0469 (p = 0.0000)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(2) = 4.24574 (p = 0.1197)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Demand NOL hour: 10  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(11) = 13925.56  
 Prob > chi2 = 0.0000  
 R-squared = 0.9567  
 Root MSE = .04654

lncons_nol	HAC				
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
lnprice_nol	-.0470746	.0075778	-6.21	0.000	-.0619268 -.0322224
lnheatdeg_1	-.0608706	.0060126	-10.12	0.000	-.072655 -.0490862
lnheatdeg_2	.0476821	.0022214	21.46	0.000	.0433282 .052036
dsummm	-.0428816	.0117489	-3.65	0.000	-.0659091 -.0198541
dwkday	.1578824	.0027029	58.41	0.000	.1525848 .1631799
lnpoil	.1797048	.0209331	8.58	0.000	.1386768 .2207329
tsin	-.0000666	.0000138	-4.81	0.000	-.0000937 -.0000395
tcos	.0649729	.0053351	12.18	0.000	.0545162 .0754296
lnipi	.1772864	.0329023	5.39	0.000	.1127991 .2417737
lnlength_1	-.0290776	.047941	-0.61	0.544	-.1230403 .0648851
_cons	7.84358	.1947912	40.27	0.000	7.461796 8.225364

Instrumented: lnprice\_nol  
 Instruments: lnheatdeg\_osl lnheatdeg\_osl\_2 dsummm dwkday lnpoil trend tsin tcos  
 lnipi lnlength\_osl lnrel\_reservoir\_nol lnco2\_p co2\_d  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(3,1449)	Prob > F
lnprice_nol	0.7126	0.7100	0.6098	70.8047	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
 Ho: variables are exogenous

HAC score chi2(1) = 43.3576 (p = 0.0000)  
 (Prewhitening performed with 1 lag)  
 HAC regression F(1,1450) = 42.9383 (p = 0.0000)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(2) = 2.6109 (p = 0.2711)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Demand NOL hour: 11  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(11) = 13932.47  
 Prob > chi2 = 0.0000  
 R-squared = 0.9584  
 Root MSE = .04366

lncons_nol	HAC				
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
lnprice_nol	-.0457675	.0074126	-6.17	0.000	-.0602961 -.031239
lnheatdeg_~1	-.0558009	.0057056	-9.78	0.000	-.0669837 -.0446182
lnheatdeg_~2	.0465679	.0021285	21.88	0.000	.0423961 .0507396
dsummm	-.0373393	.0116286	-3.21	0.001	-.0601308 -.0145477
dwkday	.1242987	.0024703	50.32	0.000	.1194569 .1291405
lnpoil	.1644974	.0202589	8.12	0.000	.1247907 .204204
trend	-.0000558	.0000132	-4.23	0.000	-.0000817 -.00003
tsin	.0614699	.005194	11.83	0.000	.0512899 .0716499
tcos	.1036841	.0240373	4.31	0.000	.0565718 .1507964
lnipi	.1564359	.0304494	5.14	0.000	.0967561 .2161156
lnlength_~1	-.0423536	.0444939	-0.95	0.341	-.12956 .0448527
_cons	8.04281	.1742971	46.14	0.000	7.701194 8.384426

Instrumented: lnprice\_nol  
 Instruments: lnheatdeg\_osl lnheatdeg\_osl\_2 dsummm dwkday lnpoil trend tsin tcos  
 lnipi lnlength\_osl lnrel\_reservoir\_nol lnco2\_p co2\_d  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(3,1449)	Prob > F
lnprice_nol	0.7213	0.7188	0.6250	72.2224	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
 Ho: variables are exogenous

HAC score chi2(1) = 36.8709 (p = 0.0000)  
 (Prewhitening performed with 1 lag)  
 HAC regression F(1,1450) = 38.4196 (p = 0.0000)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(2) = 2.44121 (p = 0.2951)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Demand N01 hour: 12  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(11) = 13284.66  
 Prob > chi2 = 0.0000  
 R-squared = 0.9598  
 Root MSE = .0421

lncons_nol	HAC				
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
lnprice_nol	-.046132	.0075144	-6.14	0.000	-.0608599 -.0314041
lnheatdeg_~1	-.0502405	.00562	-8.94	0.000	-.0612556 -.0392255
lnheatdeg_~2	.0456977	.0021249	21.51	0.000	.0415329 .0498624
dsummm	-.0380099	.0113077	-3.36	0.001	-.0601725 -.0158472
dwkday	.1082198	.0023898	45.28	0.000	.1035358 .1129038
lnpoil	.1601995	.0203875	7.86	0.000	.1202408 .2001582
trend	-.0000552	.0000132	-4.17	0.000	-.0000811 -.0000293
tsin	.0600022	.0052798	11.36	0.000	.0496539 .0703505
tcos	.0920038	.0231054	3.98	0.000	.0467181 .1372895
lnipi	.1480492	.0301556	4.91	0.000	.0889454 .207153
lnlength_~1	-.0578045	.0432688	-1.34	0.182	-.1426098 .0270008
_cons	8.14224	.1666555	48.86	0.000	7.815602 8.468879

Instrumented: lnprice\_nol  
 Instruments: lnheatdeg\_osl lnheatdeg\_osl\_2 dsummm dwkday lnpoil trend tsin tcos  
 lnipi lnlength\_osl lnrel\_reservoir\_nol lnco2\_p co2\_d  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(3,1449)	Prob > F
lnprice_nol	0.7248	0.7223	0.6317	72.7697	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
 Ho: variables are exogenous

HAC score chi2(1) = 27.4501 (p = 0.0000)  
 (Prewhitening performed with 1 lag)  
 HAC regression F(1,1450) = 33.5472 (p = 0.0000)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(2) = 2.89739 (p = 0.2349)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Demand N01 hour: 13  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(11) = 12367.02  
 Prob > chi2 = 0.0000  
 R-squared = 0.9603  
 Root MSE = .04155

lncons_nol	HAC				
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
lnprice_nol	-.0489239	.0078182	-6.26	0.000	-.0642472 -.0336005
lnheatdeg_~1	-.0480457	.0054464	-8.82	0.000	-.0587205 -.0373708
lnheatdeg_~2	.045405	.0021117	21.50	0.000	.0412662 .0495439
dsummm	-.0388895	.0115615	-3.36	0.001	-.0615495 -.0162294
dwkday	.1076061	.0024801	43.39	0.000	.1027452 .112467
lnpoil	.1650506	.0202005	8.17	0.000	.1254584 .2046429
tsin	-.0000572	.0000133	-4.29	0.000	-.0000833 -.000031
tcos	.0607829	.005429	11.20	0.000	.0501423 .0714236
lnipi	.0828338	.0224819	3.68	0.000	.03877 .1268976
lnlength_~1	.1534286	.0305796	5.02	0.000	.0934937 .2133636
_cons	-.0726934	.0425221	-1.71	0.087	-.1560352 .0106484
	8.142669	.1634787	49.81	0.000	7.822257 8.463082

Instrumented: lnprice\_nol  
 Instruments: lnheatdeg\_osl lnheatdeg\_osl\_2 dsummm dwkday lnpoil trend tsin tcos  
 lnipi lnlength\_osl lnrel\_reservoir\_nol lnco2\_p co2\_d  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(3,1449)	Prob > F
lnprice_nol	0.7249	0.7224	0.6315	72.2289	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
 Ho: variables are exogenous

HAC score chi2(1) = 25.6393 (p = 0.0000)  
 (Prewhitening performed with 1 lag)  
 HAC regression F(1,1450) = 33.0028 (p = 0.0000)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(2) = 2.08491 (p = 0.3526)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Demand NOL hour: 14  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(11) = 12302.45  
 Prob > chi2 = 0.0000  
 R-squared = 0.9602  
 Root MSE = .04158

lncons_nol	HAC				
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
lnprice_nol	-.0484107	.0078103	-6.20	0.000	-.0637186 -.0331029
lnheatdeg_~1	-.0418325	.0056547	-7.40	0.000	-.0529155 -.0307495
lnheatdeg_~2	.0436843	.0021345	20.47	0.000	.0395007 .0478679
dsummm	-.0404605	.0114526	-3.53	0.000	-.0629071 -.0180138
dwkday	.1123543	.0025835	43.49	0.000	.1072907 .1174179
lnpoil	.1620594	.019959	8.12	0.000	.1229404 .2011783
tsin	-.0000557	.0000132	-4.22	0.000	-.0000816 -.0000298
tcos	.0598848	.0054848	10.92	0.000	.0491348 .0706347
lnipi	.073417	.0216496	3.39	0.001	.0309845 .1158495
lnlength_~1	.1569055	.0306538	5.12	0.000	.0968251 .2169859
_cons	-.089424	.0412079	-2.17	0.030	-.1701899 -.008658
	8.164265	.1619978	50.40	0.000	7.846756 8.481775

Instrumented: lnprice\_nol  
 Instruments: lnheatdeg\_osl lnheatdeg\_osl\_2 dsummm dwkday lnpoil trend tsin tcos  
 lnipi lnlength\_osl lnrel\_reservoir\_nol lnco2\_p co2\_d  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(3,1449)	Prob > F
lnprice_nol	0.7217	0.7192	0.6269	71.2031	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
 Ho: variables are exogenous

HAC score chi2(1) = 28.8405 (p = 0.0000)  
 (Prewhitening performed with 1 lag)  
 HAC regression F(1,1450) = 35.9895 (p = 0.0000)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(2) = 1.97446 (p = 0.3726)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Demand NOL hour: 15  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(11) = 11985.17  
 Prob > chi2 = 0.0000  
 R-squared = 0.9606  
 Root MSE = .04174

lncons_nol	HAC				
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
lnprice_nol	-.0465805	.0076508	-6.09	0.000	-.0615759 -.0315851
lnheatdeg_~1	-.0388904	.0057737	-6.74	0.000	-.0502066 -.0275742
lnheatdeg_~2	.0428501	.002169	19.76	0.000	.0385988 .0471013
dsummm	-.042503	.0110973	-3.83	0.000	-.0642533 -.0207527
dwkday	.1148666	.0026216	43.82	0.000	.1097284 .1200048
lnpoil	.1656838	.0200345	8.27	0.000	.1264169 .2049508
trend	-.0000579	.0000132	-4.39	0.000	-.0000837 -.0000321
tsin	.061447	.005422	11.33	0.000	.0508201 .0720738
tcos	.0694809	.0215744	3.22	0.001	.0271958 .111766
lnipi	.1557587	.0309385	5.03	0.000	.0951204 .2163971
lnlength_~1	-.1022087	.0415192	-2.46	0.014	-.1835849 -.0208325
_cons	8.176579	.1641014	49.83	0.000	7.854946 8.498212

Instrumented: lnprice\_nol  
 Instruments: lnheatdeg\_osl lnheatdeg\_osl\_2 dsummm dwkday lnpoil trend tsin tcos  
 lnipi lnlength\_osl lnrel\_reservoir\_nol lnco2\_p co2\_d  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(3,1449)	Prob > F
lnprice_nol	0.7241	0.7216	0.6287	71.6479	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
 Ho: variables are exogenous

HAC score chi2(1) = 29.9311 (p = 0.0000)  
 (Prewhitening performed with 1 lag)  
 HAC regression F(1,1450) = 36.3161 (p = 0.0000)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(2) = 2.36817 (p = 0.3060)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Demand NOL hour: 16  
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(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(11) = 12001.76  
 Prob > chi2 = 0.0000  
 R-squared = 0.9620  
 Root MSE = .04204

lncons_nol	HAC				
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
lnprice_nol	-.0448266	.0076548	-5.86	0.000	-.0598298 -.0298234
lnheatdeg_~1	-.0328074	.0057512	-5.70	0.000	-.0440795 -.0215353
lnheatdeg_~2	.0411465	.0022128	18.60	0.000	.0368096 .0454835
dsummm	-.0400302	.0106578	-3.76	0.000	-.060919 -.0191413
dwkday	.1100342	.0026256	41.91	0.000	.1048882 .1151803
lnpoil	.1575041	.0199968	7.88	0.000	.1183112 .1966971
trend	-.0000544	.0000132	-4.11	0.000	-.0000803 -.0000285
tsin	.0634081	.005492	11.55	0.000	.0526439 .0741723
tcos	.0513358	.0214437	2.39	0.017	.0093069 .0933646
lnipi	.1629999	.0311152	5.23	0.000	.1016152 .2235846
lnlength_~1	-.1513506	.0411406	-3.68	0.000	-.2319846 -.0707166
_cons	8.281165	.1617161	51.21	0.000	7.964207 8.598122

Instrumented: lnprice\_nol  
 Instruments: lnheatdeg\_osl lnheatdeg\_osl\_2 dsummm dwkday lnpoil trend tsin tcos  
 lnipi lnlength\_osl lnrel\_reservoir\_nol lnco2\_p co2\_d  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(3,1449)	Prob > F
lnprice_nol	0.7167	0.7142	0.6186	69.8287	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
 Ho: variables are exogenous

HAC score chi2(1) = 31.8877 (p = 0.0000)  
 (Prewhitening performed with 1 lag)  
 HAC regression F(1,1450) = 36.6446 (p = 0.0000)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(2) = 2.16084 (p = 0.3395)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Demand NOL hour: 17  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(11) = 12048.31  
 Prob > chi2 = 0.0000  
 R-squared = 0.9636  
 Root MSE = .04263

lncons_nol	HAC				
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
lnprice_nol	-.046618	.0078213	-5.96	0.000	-.0619475 -.0312886
lnheatdeg_~1	-.0297332	.0058136	-5.11	0.000	-.0411276 -.0183387
lnheatdeg_~2	.0404976	.0021714	18.65	0.000	.0362418 .0447535
dsummm	-.038136	.010927	-3.49	0.000	-.0595525 -.0167194
dwkday	.1020025	.0025866	39.43	0.000	.0969328 .1070722
lnpoil	.1649209	.0201389	8.19	0.000	.1254495 .2043924
trend	-.0000575	.0000134	-4.30	0.000	-.0000838 -.0000313
tsin	.0652888	.0055299	11.81	0.000	.0544504 .0761272
tcos	.0325089	.0217366	1.50	0.135	-.010094 .0751117
lnipi	.1770775	.0326111	5.43	0.000	.113161 .240994
lnlength_~1	-.2096032	.0417938	-5.02	0.000	-.2915175 -.1276889
_cons	8.343004	.1681105	49.63	0.000	8.013514 8.672495

Instrumented: lnprice\_nol  
 Instruments: lnheatdeg\_osl lnheatdeg\_osl\_2 dsummm dwkday lnpoil trend tsin tcos  
 lnipi lnlength\_osl lnrel\_reservoir\_nol lnco2\_p co2\_d  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(3,1449)	Prob > F
lnprice_nol	0.7172	0.7146	0.6159	68.1272	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
 Ho: variables are exogenous

HAC score chi2(1) = 30.7211 (p = 0.0000)  
 (Prewhitening performed with 1 lag)  
 HAC regression F(1,1450) = 36.9971 (p = 0.0000)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(2) = 1.33298 (p = 0.5135)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Demand NOL hour: 18  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(11) = 13258.16  
 Prob > chi2 = 0.0000  
 R-squared = 0.9660  
 Root MSE = .04201

lncons_nol	HAC				
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
lnprice_nol	-.0450378	.0077249	-5.83	0.000	-.0601784 -.0298973
lnheatdeg_~1	-.0368914	.0057747	-6.39	0.000	-.0482096 -.0255732
lnheatdeg_~2	.0427858	.0021191	20.19	0.000	.0386324 .0469393
dsummm	-.0319141	.0110978	-2.88	0.004	-.0536653 -.0101629
dwkday	.087516	.0024119	36.29	0.000	.0827888 .0922433
lnpoil	.1549295	.0199993	7.75	0.000	.1157316 .1941273
trend	-.0000522	.0000131	-3.98	0.000	-.0000784 -.0000265
tsin	.0583388	.0053572	10.89	0.000	.0478389 .0688387
tcos	.0841872	.0217294	3.87	0.000	.0415984 .126776
lnipi	.1788807	.0318266	5.62	0.000	.1165016 .2412597
lnlength_~1	-.1207932	.0414142	-2.92	0.004	-.2019635 -.0396229
_cons	8.153249	.1688548	48.29	0.000	7.8223 8.484198

Instrumented: lnprice\_nol  
 Instruments: lnheatdeg\_osl lnheatdeg\_osl\_2 dsummm dwkday lnpoil trend tsin tcos  
 lnipi lnlength\_osl lnrel\_reservoir\_nol lnco2\_p co2\_d  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(3,1449)	Prob > F
lnprice_nol	0.7133	0.7107	0.6113	66.6625	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
 Ho: variables are exogenous

HAC score chi2(1) = 32.0756 (p = 0.0000)  
 (Prewhitening performed with 1 lag)  
 HAC regression F(1,1450) = 37.9597 (p = 0.0000)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(2) = 1.33012 (p = 0.5142)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Demand NOL hour: 19  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(11) = 13631.70  
 Prob > chi2 = 0.0000  
 R-squared = 0.9672  
 Root MSE = .04157

lncons_nol	HAC				
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
lnprice_nol	-.0477575	.0075159	-6.35	0.000	-.0624884 -.0330265
lnheatdeg_~1	-.0386245	.0058104	-6.65	0.000	-.0500127 -.0272362
lnheatdeg_~2	.0441714	.0021401	20.64	0.000	.0399769 .0483659
dsummm	-.0285647	.0110323	-2.59	0.010	-.0501875 -.0069418
dwkday	.0750411	.0023362	32.12	0.000	.0704622 .0796199
lnpoil	.1594013	.0195564	8.15	0.000	.1210715 .1977311
trend	-.0000545	.0000128	-4.25	0.000	-.0000797 -.0000294
tsin	.0471205	.0051548	9.14	0.000	.0370172 .0572238
tcos	.1515192	.0226073	6.70	0.000	.1072098 .1958287
lnipi	.1701732	.0313062	5.44	0.000	.1088142 .2315322
lnlength_~1	.0144409	.0427282	0.34	0.735	-.0693048 .0981867
_cons	7.859091	.1724079	45.58	0.000	7.521178 8.197004

Instrumented: lnprice\_nol  
 Instruments: lnheatdeg\_osl lnheatdeg\_osl\_2 dsummm dwkday lnpoil trend tsin tcos  
 lnipi lnlength\_osl lnrel\_reservoir\_nol lnco2\_p co2\_d  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(3,1449)	Prob > F
lnprice_nol	0.7155	0.7129	0.6140	66.9545	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
 Ho: variables are exogenous

HAC score chi2(1) = 32.5716 (p = 0.0000)  
 (Prewhitening performed with 1 lag)  
 HAC regression F(1,1450) = 47.784 (p = 0.0000)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(2) = .530513 (p = 0.7670)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Demand N01 hour: 20  
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(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(11) = 13421.95  
 Prob > chi2 = 0.0000  
 R-squared = 0.9664  
 Root MSE = .04161

lncons_nol	HAC				
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
lnprice_nol	-.0480567	.0074228	-6.47	0.000	-.062605 -.0335083
lnheatdeg_~1	-.0337264	.0055719	-6.05	0.000	-.044647 -.0228057
lnheatdeg_~2	.0421919	.0021884	19.28	0.000	.0379027 .046481
dsummm	-.0290029	.0112304	-2.58	0.010	-.0510141 -.0069917
dwkday	.0685992	.0022999	29.83	0.000	.0640914 .073107
lnpoil	.1618828	.0189984	8.52	0.000	.1246466 .1991191
trend	-.0000505	.0000127	-3.99	0.000	-.0000753 -.0000257
tsin	.0397247	.0051194	7.76	0.000	.0296909 .0497584
tcos	.1914375	.0230923	8.29	0.000	.1461775 .2366975
lnipi	.1592152	.0305024	5.22	0.000	.0994316 .2189988
lnlength_~1	.0968015	.0430992	2.25	0.025	.0123286 .1812745
_cons	7.688224	.1734657	44.32	0.000	7.348238 8.028211

Instrumented: lnprice\_nol  
 Instruments: lnheatdeg\_osl lnheatdeg\_osl\_2 dsummm dwkday lnpoil trend tsin tcos  
 lnipi lnlength\_osl lnrel\_reservoir\_nol lnco2\_p co2\_d  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(3,1449)	Prob > F
lnprice_nol	0.7164	0.7139	0.6158	66.6252	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
 Ho: variables are exogenous

HAC score chi2(1) = 32.1136 (p = 0.0000)  
 (Prewhitening performed with 1 lag)  
 HAC regression F(1,1450) = 51.3773 (p = 0.0000)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(2) = .759326 (p = 0.6841)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Demand N01 hour: 21  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(11) = 12016.00  
 Prob > chi2 = 0.0000  
 R-squared = 0.9630  
 Root MSE = .04242



lncons_nol	HAC				
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
lnprice_nol	-.0494151	.0081848	-6.04	0.000	-.0654569 -.0333732
lnheatdeg_~1	-.0299748	.0062254	-4.81	0.000	-.0421764 -.0177733
lnheatdeg_~2	.0393108	.0022752	17.28	0.000	.0348514 .0437702
dsummm	-.0337857	.0111427	-3.03	0.002	-.0556249 -.0119464
dwkday	.0640315	.0021322	30.03	0.000	.0598526 .0682105
lnpoil	.1743279	.0224315	7.77	0.000	.130363 .2182928
trend	-.0000545	.0000148	-3.68	0.000	-.0000835 -.0000255
tsin	.0418573	.0055656	7.52	0.000	.030949 .0527656
tcos	.1932206	.0248159	7.79	0.000	.1445824 .2418588
lnipi	.1577886	.0318235	4.96	0.000	.0954157 .2201615
lndlength_~1	.1042502	.045522	2.29	0.022	.0150287 .1934717
_cons	7.634831	.1819373	41.96	0.000	7.278241 7.991422

Instrumented: lnprice\_nol  
 Instruments: lnheatdeg\_osl lnheatdeg\_osl\_2 dsummm dwkday lnpoil trend tsin tcos  
 lnipi lndlength\_osl lnrel\_reservoir\_nol lnco2\_p co2\_d  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(3,1449)	Prob > F
lnprice_nol	0.7103	0.7077	0.6100	63.9303	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
 Ho: variables are exogenous

HAC score chi2(1) = 30.6126 (p = 0.0000)  
 (Prewhitening performed with 1 lag)  
 HAC regression F(1,1450) = 47.2139 (p = 0.0000)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(2) = 1.66949 (p = 0.4340)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Demand N01 hour: 22  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(11) = 10662.75  
 Prob > chi2 = 0.0000  
 R-squared = 0.9590  
 Root MSE = .04326

lncons_nol	HAC				
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
lnprice_nol	-.0490013	.0081131	-6.04	0.000	-.0649027 -.0330999
lnheatdeg_~1	-.033464	.0062213	-5.38	0.000	-.0456575 -.0212705
lnheatdeg_~2	.0401073	.0022101	18.15	0.000	.0357756 .0444389
dsummm	-.040966	.0115717	-3.54	0.000	-.0636462 -.0182859
dwkday	.0580254	.0021618	26.84	0.000	.0537882 .0622625
lnpoil	.1827567	.0221368	8.26	0.000	.1393693 .226144
trend	-.0000542	.0000145	-3.74	0.000	-.0000827 -.0000258
tsin	.0476356	.0053998	8.82	0.000	.0370521 .058219
tcos	.1668807	.0245643	6.79	0.000	.1187355 .2150259
lnipi	.1121759	.0329416	3.41	0.001	.0476116 .1767402
lndlength_~1	.0636857	.044819	1.42	0.155	-.0241578 .1515293
_cons	7.896485	.1822493	43.33	0.000	7.539283 8.253687

Instrumented: lnprice\_nol  
 Instruments: lnheatdeg\_osl lnheatdeg\_osl\_2 dsummm dwkday lnpoil trend tsin tcos  
 lnipi lndlength\_osl lnrel\_reservoir\_nol lnco2\_p co2\_d  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(3,1449)	Prob > F
lnprice_nol	0.7067	0.7041	0.6068	62.9041	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
 Ho: variables are exogenous

HAC score chi2(1) = 29.0071 (p = 0.0000)  
 (Prewhitening performed with 1 lag)  
 HAC regression F(1,1450) = 38.0857 (p = 0.0000)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(2) = 1.38759 (p = 0.4997)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Demand N01 hour: 23  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(11) = 10147.62  
 Prob > chi2 = 0.0000  
 R-squared = 0.9565  
 Root MSE = .04257

lncons_nol	HAC				
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
lnprice_nol	-.0453996	.0072151	-6.29	0.000	-.059541 -.0312581
lnheatdeg_~1	-.0499672	.0064343	-7.77	0.000	-.0625782 -.0373562
lnheatdeg_~2	.043832	.0022529	19.46	0.000	.0394164 .0482476
dsummm	-.0307784	.0123193	-2.50	0.012	-.0549238 -.006633
dwkday	.0444227	.0021578	20.59	0.000	.0401935 .0486519
lnpoil	.1732867	.0198171	8.74	0.000	.1344459 .2121275
trend	-.0000425	.000013	-3.27	0.001	-.000068 -.0000171
tsin	.0554851	.0050271	11.04	0.000	.0456322 .0653379
tcos	.1378546	.0230642	5.98	0.000	.0926496 .1830596
lnipi	.0663317	.0314806	2.11	0.035	.0046309 .1280324
lndlength_~1	.0163273	.0427559	0.38	0.703	-.0674727 .1001273
_cons	8.216484	.1725134	47.63	0.000	7.878364 8.554605

Instrumented: lnprice\_nol  
 Instruments: lnheatdeg\_osl lnheatdeg\_osl\_2 dsummm dwkday lnpoil trend tsin tcos  
 lnipi lndlength\_osl lnrel\_reservoir\_nol lnco2\_p co2\_d  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(3,1449)	Prob > F
lnprice_nol	0.7016	0.6989	0.6009	60.639	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
 Ho: variables are exogenous

HAC score chi2(1) = 28.1977 (p = 0.0000)  
 (Prewhitening performed with 1 lag)  
 HAC regression F(1,1450) = 38.73 (p = 0.0000)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(2) = 1.46197 (p = 0.4814)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Demand NOL hour: 24  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(11) = 8360.09  
 Prob > chi2 = 0.0000  
 R-squared = 0.9494  
 Root MSE = .04535

lncons_nol	HAC				
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
lnprice_nol	-.0463664	.0071122	-6.52	0.000	-.0603061 -.0324268
lnheatdeg_~1	-.0734667	.0074049	-9.92	0.000	-.0879801 -.0589533
lnheatdeg_~2	.0485476	.0025289	19.20	0.000	.043591 .0535042
dsummm	-.0058054	.0118883	-0.49	0.625	-.029106 .0174952
dwkday	.0278711	.002199	12.67	0.000	.023561 .0321811
lnpoil	.1737984	.0208218	8.35	0.000	.1329884 .2146084
trend	-.0000429	.0000136	-3.15	0.002	-.0000695 -.0000162
tsin	.0704507	.0055071	12.79	0.000	.059657 .0812445
tcos	.0965573	.02416	4.00	0.000	.0492045 .1439101
lnipi	.1126258	.035443	3.18	0.001	.0431587 .1820929
lndlength_~1	-.0709988	.0452931	-1.57	0.117	-.1597717 .0177741
_cons	8.199847	.1853735	44.23	0.000	7.836521 8.563172

Instrumented: lnprice\_nol  
 Instruments: lnheatdeg\_osl lnheatdeg\_osl\_2 dsummm dwkday lnpoil trend tsin tcos  
 lnipi lndlength\_osl lnrel\_reservoir\_nol lnco2\_p co2\_d  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(3,1449)	Prob > F
lnprice_nol	0.6934	0.6907	0.5903	59.5352	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
 Ho: variables are exogenous

HAC score chi2(1) = 29.4452 (p = 0.0000)  
 (Prewhitening performed with 1 lag)  
 HAC regression F(1,1450) = 42.0664 (p = 0.0000)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(2) = 1.88267 (p = 0.3901)  
 (Prewhitening performed with 1 lag)

117  
 118  
 119 di \_newline

120  
 121 di "/SUPPLY & DEMAND DK1/"  
 /SUPPLY & DEMAND DK1/

122  
 123 di \_newline

```

124
125
126 gen r = _n
127 sort r
128 tsset r
    time variable: r, 1 to 35112
    delta: 1 unit
129 ipolate temp_cph r, generate(temp_cph)
130 drop r
131 sort time
132 tsset time, clocktime delta(1 hour)
    time variable: time, 12apr2004 00:00:00.000 to
    13apr2008 23:00:00.000
    delta: 1 hour
133
134 label var temp_cph "temperature in Copenhagen"
135
136 gen heatdeg_cph = 0
137 replace heatdeg_cph = (17-temp_cph) if temp_cph < 17
    (29446 real changes made)
138 label var heatdeg_cph "Heating degree Copenhagen when temp_cph<17"
139
140 gen lnheatdeg_cph = 0
141 replace lnheatdeg_cph = ln(heatdeg_cph) if heatdeg_cph > 1
    (27804 real changes made)
142 label var lnheatdeg_cph "Log of heating degree in Copenhagen"
143
144 gen lnheatdeg_cph_2 = (lnheatdeg_cph)*(lnheatdeg_cph)
145 label var lnheatdeg_cph_2 "lnheatdeg_cph squared"
146
147 gen gen_dkl_thermal = (gen_dkl_cent + gen_dkl_decent)
148 label var gen_dkl_thermal "Generation of thermal power DK1 (both central and dece
    > ntral)"
149
150 gen lngen_dkl_thermal = ln(gen_dkl_thermal)
151 list date year week day hour idz gen_dkl_thermal if lngen_dkl_thermal==. & idz
152 label var lngen_dkl_thermal "Log of gen_dkl_thermal"
153 gen llnge_dkl_thermal = l.lngen_dkl_thermal
    (1 missing value generated)
154
155 gen lnprice_dkl = ln(price_dkl)
    (156 missing values generated)

```

156 list date year week day hour idz price\_dkl if lnprice\_dkl==.

	date	year	week	day	hour	idz	price-kl
6172.	25.12.2004	2004	52	6	4	1	0.00
6368.	02.01.2005	2004	53	7	8	1	0.00
6371.	02.01.2005	2004	53	7	11	1	0.00
6372.	02.01.2005	2004	53	7	12	1	0.00
6373.	02.01.2005	2004	53	7	13	1	0.00
6374.	02.01.2005	2004	53	7	14	1	0.00
6375.	02.01.2005	2004	53	7	15	1	0.00
6376.	02.01.2005	2004	53	7	16	1	0.00
6382.	02.01.2005	2004	53	7	22	1	0.00
6383.	02.01.2005	2004	53	7	23	1	0.00
6384.	02.01.2005	2004	53	7	24	1	0.00
6505.	08.01.2005	2005	1	6	1	1	0.00
6506.	08.01.2005	2005	1	6	2	1	0.00
6507.	08.01.2005	2005	1	6	3	1	0.00
6508.	08.01.2005	2005	1	6	4	1	0.00
6509.	08.01.2005	2005	1	6	5	1	0.00
6510.	08.01.2005	2005	1	6	6	1	0.00
17113.	26.03.2006	2006	12	7	1	1	0.00
17114.	26.03.2006	2006	12	7	2	1	0.00
17115.	26.03.2006	2006	12	7	3	1	0.00
17116.	26.03.2006	2006	12	7	4	1	0.00
17117.	26.03.2006	2006	12	7	5	1	0.00
17118.	26.03.2006	2006	12	7	6	1	0.00
17119.	26.03.2006	2006	12	7	7	1	0.00
17120.	26.03.2006	2006	12	7	8	1	0.00
17121.	26.03.2006	2006	12	7	9	1	0.00
17122.	26.03.2006	2006	12	7	10	1	0.00
17123.	26.03.2006	2006	12	7	11	1	0.00
17124.	26.03.2006	2006	12	7	12	1	0.00
17125.	26.03.2006	2006	12	7	13	1	0.00
17126.	26.03.2006	2006	12	7	14	1	0.00
17127.	26.03.2006	2006	12	7	15	1	0.00
17128.	26.03.2006	2006	12	7	16	1	0.00
17129.	26.03.2006	2006	12	7	17	1	0.00
20985.	03.09.2006	2006	35	7	9	1	0.00
22274.	27.10.2006	2006	43	5	2	1	0.00
22275.	27.10.2006	2006	43	5	3	1	0.00
22276.	27.10.2006	2006	43	5	4	1	0.00
22277.	27.10.2006	2006	43	5	5	1	0.00
22657.	12.11.2006	2006	45	7	1	1	0.00
22658.	12.11.2006	2006	45	7	2	1	0.00
22659.	12.11.2006	2006	45	7	3	1	0.00
22660.	12.11.2006	2006	45	7	4	1	0.00
22661.	12.11.2006	2006	45	7	5	1	0.00
22662.	12.11.2006	2006	45	7	6	1	0.00
22663.	12.11.2006	2006	45	7	7	1	0.00
23931.	04.01.2007	2007	1	4	3	1	0.00
23932.	04.01.2007	2007	1	4	4	1	0.00
24145.	13.01.2007	2007	2	6	1	1	0.00
24146.	13.01.2007	2007	2	6	2	1	0.00
24147.	13.01.2007	2007	2	6	3	1	0.00
24148.	13.01.2007	2007	2	6	4	1	0.00
24149.	13.01.2007	2007	2	6	5	1	0.00
24150.	13.01.2007	2007	2	6	6	1	0.00
24170.	14.01.2007	2007	2	7	2	1	0.00
24171.	14.01.2007	2007	2	7	3	1	0.00
24172.	14.01.2007	2007	2	7	4	1	0.00
24173.	14.01.2007	2007	2	7	5	1	0.00
24174.	14.01.2007	2007	2	7	6	1	0.00
24338.	21.01.2007	2007	3	7	2	1	0.00

24339.	21.01.2007	2007	3	7	3	1	0.00
24340.	21.01.2007	2007	3	7	4	1	0.00
24341.	21.01.2007	2007	3	7	5	1	0.00
24342.	21.01.2007	2007	3	7	6	1	0.00
24510.	28.01.2007	2007	4	7	6	1	0.00
24511.	28.01.2007	2007	4	7	7	1	0.00
24512.	28.01.2007	2007	4	7	8	1	0.00
24697.	05.02.2007	2007	6	1	1	1	0.00
25684.	18.03.2007	2007	11	7	4	1	0.00
25685.	18.03.2007	2007	11	7	5	1	0.00
25686.	18.03.2007	2007	11	7	6	1	0.00
25687.	18.03.2007	2007	11	7	7	1	0.00
25688.	18.03.2007	2007	11	7	8	1	0.00
28375.	08.07.2007	2007	27	7	7	1	0.00
31059.	28.10.2007	2007	43	7	3	1	0.00
31060.	28.10.2007	2007	43	7	4	1	0.00
31061.	28.10.2007	2007	43	7	5	1	0.00
31062.	28.10.2007	2007	43	7	6	1	0.00
31080.	28.10.2007	2007	43	7	24	1	0.00
31347.	09.11.2007	2007	45	5	3	1	0.00
31350.	09.11.2007	2007	45	5	6	1	0.00
31729.	25.11.2007	2007	47	7	1	1	0.00
31730.	25.11.2007	2007	47	7	2	1	0.00
31731.	25.11.2007	2007	47	7	3	1	0.00
31732.	25.11.2007	2007	47	7	4	1	0.00
31733.	25.11.2007	2007	47	7	5	1	0.00
31734.	25.11.2007	2007	47	7	6	1	0.00
31735.	25.11.2007	2007	47	7	7	1	0.00
31736.	25.11.2007	2007	47	7	8	1	0.00
31737.	25.11.2007	2007	47	7	9	1	0.00
31738.	25.11.2007	2007	47	7	10	1	0.00
31741.	25.11.2007	2007	47	7	13	1	0.00
31742.	25.11.2007	2007	47	7	14	1	0.00
31743.	25.11.2007	2007	47	7	15	1	0.00
31744.	25.11.2007	2007	47	7	16	1	0.00
31752.	25.11.2007	2007	47	7	24	1	0.00
31753.	26.11.2007	2007	48	1	1	1	0.00
31754.	26.11.2007	2007	48	1	2	1	0.00
31755.	26.11.2007	2007	48	1	3	1	0.00
31756.	26.11.2007	2007	48	1	4	1	0.00
31757.	26.11.2007	2007	48	1	5	1	0.00
31876.	01.12.2007	2007	48	6	4	1	0.00
31877.	01.12.2007	2007	48	6	5	1	0.00
31903.	02.12.2007	2007	48	7	7	1	0.00
31904.	02.12.2007	2007	48	7	8	1	0.00
32068.	09.12.2007	2007	49	7	4	1	0.00
32069.	09.12.2007	2007	49	7	5	1	0.00
32449.	25.12.2007	2007	52	2	1	1	0.00
32450.	25.12.2007	2007	52	2	2	1	0.00
32451.	25.12.2007	2007	52	2	3	1	0.00
32452.	25.12.2007	2007	52	2	4	1	0.00
32453.	25.12.2007	2007	52	2	5	1	0.00
32454.	25.12.2007	2007	52	2	6	1	0.00
32455.	25.12.2007	2007	52	2	7	1	0.00
32456.	25.12.2007	2007	52	2	8	1	0.00
32457.	25.12.2007	2007	52	2	9	1	0.00
32463.	25.12.2007	2007	52	2	15	1	0.00
32464.	25.12.2007	2007	52	2	16	1	0.00
32470.	25.12.2007	2007	52	2	22	1	0.00
32471.	25.12.2007	2007	52	2	23	1	0.00
32472.	25.12.2007	2007	52	2	24	1	0.00
32473.	26.12.2007	2007	52	3	1	1	0.00
32474.	26.12.2007	2007	52	3	2	1	0.00
32479.	26.12.2007	2007	52	3	7	1	0.00
32545.	29.12.2007	2007	52	6	1	1	0.00

32546.	29.12.2007	2007	52	6	2	1	0.00
32547.	29.12.2007	2007	52	6	3	1	0.00
32548.	29.12.2007	2007	52	6	4	1	0.00
32549.	29.12.2007	2007	52	6	5	1	0.00
32550.	29.12.2007	2007	52	6	6	1	0.00
32551.	29.12.2007	2007	52	6	7	1	0.00
32689.	04.01.2008	2008	1	5	1	1	0.00
32690.	04.01.2008	2008	1	5	2	1	0.00
32691.	04.01.2008	2008	1	5	3	1	0.00
32692.	04.01.2008	2008	1	5	4	1	0.00
32693.	04.01.2008	2008	1	5	5	1	0.00
32694.	04.01.2008	2008	1	5	6	1	0.00
32712.	04.01.2008	2008	1	5	24	1	0.00
32716.	05.01.2008	2008	1	6	4	1	0.00
32858.	11.01.2008	2008	2	5	2	1	0.00
33051.	19.01.2008	2008	3	6	3	1	0.00
33052.	19.01.2008	2008	3	6	4	1	0.00
33053.	19.01.2008	2008	3	6	5	1	0.00
33098.	21.01.2008	2008	4	1	2	1	0.00
33099.	21.01.2008	2008	4	1	3	1	0.00
33100.	21.01.2008	2008	4	1	4	1	0.00
33101.	21.01.2008	2008	4	1	5	1	0.00
33389.	02.02.2008	2008	5	6	5	1	0.00
34081.	02.03.2008	2008	9	7	1	1	0.00
34082.	02.03.2008	2008	9	7	2	1	0.00
34083.	02.03.2008	2008	9	7	3	1	0.00
34084.	02.03.2008	2008	9	7	4	1	0.00
34085.	02.03.2008	2008	9	7	5	1	0.00
34086.	02.03.2008	2008	9	7	6	1	0.00
34087.	02.03.2008	2008	9	7	7	1	0.00
34345.	13.03.2008	2008	11	4	1	1	0.00

157 //if price equal to zero in some hours --> fix it  
 158 replace lnprice\_dk1 = ln(0.01) if price\_dk1<0.01  
 (156 real changes made)

159 label var lnprice\_dk1 "Log of price\_dk1"

160

161 gen lncons\_dk1 = ln(cons\_dk1)

162 list date year week day hour idz cons\_dk1 if lncons\_dk1==.

163 label var lncons\_dk1 "Log of consumption in DK1"

164

165 gen lndlength\_cph = ln(dlength\_cph)

166 list date year week day hour idz dlength\_cph if dlength\_cph==.

167 label var lndlength\_cph "Log of daylength in Copenhagen"

168

169 gen dksumm = (week >= 27) & (week <= 34)

170 di \_newline

```

171
172 forvalues h = 1/24 {
2.   di _newline
3.   di "*****"
4.   di "    Supply Thermal Power DK1 hour: " 'h'
5.   di "*****"
6.   di _newline
7.
173   preserve
8.   keep if hour=='h' & idz
9.   sort date
10.  tsset date, daily
11.  tsreport, report report0 list
12.
174   ivregress 2sls lnprice_dk1 lnpccoal lnco2_p co2_d trend tsin tcos ///
>   (lngen_dk1_thermal = dwkday lnheatdeg_cph lnheatdeg_cph_2 dksumm), ///
>   vce(hac bartlett 7)
13.
175   di _newline
14.   estat first
15.
176   di _newline
16.   estat endog
17.
177   di _newline
18.   estat overid
19.
178   restore
20. }

```

```

*****
*   Supply Thermal Power DK1 hour: 1
*****

```

```

(33649 observations deleted)
time variable:  date, 12.04.2004 to 13.04.2008
delta: 1 day

```

Number of gaps in sample: 0

```

Instrumental variables (2SLS) regression      Number of obs = 1463
Wald chi2(7) = 70.12
Prob > chi2 = 0.0000
R-squared = 0.1027
Root MSE = .87243

```

lnprice_dk1	Coef.	HAC Std. Err.	z	P> z	[95% Conf. Interval]	
lngen_dk1_~1	.9946643	.2599268	3.83	0.000	.4852171	1.504111
lnpccoal	.3856608	.3211158	1.20	0.230	-.2437146	1.015036
lnco2_p	.456554	.1120196	4.08	0.000	.2369995	.6761084
co2_d	-.8224058	.3407649	-2.41	0.016	-1.490293	-.1545189
trend	-.0006639	.0001064	-6.24	0.000	-.0008725	-.0004553
tsin	-.1195254	.042056	-2.84	0.004	-.2019537	-.0370971
tcos	-.311354	.0962498	-3.23	0.001	-.5	-.1227079
_cons	-4.921292	2.316127	-2.12	0.034	-9.460818	-.3817662

```

Instrumented: lngen_dk1_thermal
Instruments:  lnpccoal lnco2_p co2_d trend tsin tcos dwkday lnheatdeg_cph
              lnheatdeg_cph_2 dksumm
HAC VCE:      Bartlett kernel with 7 lags

```

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(4,1452)	Prob > F
lngen_dk1_~1	0.4847	0.4811	0.2365	58.2598	0.0000

HAC VCE: Bartlett kernel with 7 lags

```

Tests of endogeneity
Ho: variables are exogenous

```

```

HAC score chi2(1) = .523585 (p = 0.4693)
(Prewhitening performed with 1 lag)

```

```

HAC regression F(1,1454) = .525238 (p = 0.4687)
(Based on Bartlett kernel with 7 lags)

```

Test of overidentifying restrictions:

```

Score chi2(3) = 3.82663 (p = 0.2808)
(Prewhitening performed with 1 lag)

```

```

*****
*   Supply Thermal Power DK1 hour: 2
*****

```

```

(33649 observations deleted)
time variable:  date, 12.04.2004 to 13.04.2008
delta: 1 day

```

Number of gaps in sample: 0

```

Instrumental variables (2SLS) regression      Number of obs = 1463
Wald chi2(7) = 68.94
Prob > chi2 = 0.0000
R-squared = 0.1201
Root MSE = .89387

```

lnprice_dk1	Coef.	HAC Std. Err.	z	P> z	[95% Conf. Interval]	
lngen_dk1_~1	1.148905	.2639925	4.35	0.000	.6314889	1.666321
lnpccoal	.5880959	.2972381	1.98	0.048	.00552	1.170672
lnco2_p	.4969608	.1319105	3.77	0.000	.238421	.7555006
co2_d	-.8532274	.3859896	-2.21	0.027	-1.609753	-.0967017
trend	-.0008223	.0001154	-7.12	0.000	-.0010486	-.000596
tsin	-.1110739	.0434628	-2.56	0.011	-.1962595	-.0258882
tcos	-.3398781	.0977876	-3.48	0.001	-.5315383	-.148218
_cons	-6.657361	2.364928	-2.82	0.005	-11.29254	-2.022187

```

Instrumented: lngen_dk1_thermal
Instruments:  lnpccoal lnco2_p co2_d trend tsin tcos dwkday lnheatdeg_cph
              lnheatdeg_cph_2 dksumm
HAC VCE:      Bartlett kernel with 7 lags

```

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(4,1452)	Prob > F
lngen_dk1_~1	0.5095	0.5062	0.2511	61.8031	0.0000

HAC VCE: Bartlett kernel with 7 lags

```

Tests of endogeneity
Ho: variables are exogenous

```

```

HAC score chi2(1) = .646995 (p = 0.4212)
(Prewhitening performed with 1 lag)

```

HAC regression F(1,1454) = .655126 (p = 0.4184)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(3) = 7.11981 (p = 0.0682)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Supply Thermal Power DK1 hour: 3  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(7) = 77.18  
 Prob > chi2 = 0.0000  
 R-squared = 0.1127  
 Root MSE = .94782

lnprice_dk1	Coef.	HAC Std. Err.	z	P> z	[95% Conf. Interval]
lngen_dk1~1	1.240708	.2614329	4.75	0.000	.7283087 1.753107
lnpcoal	.6618363	.2959999	2.24	0.025	.0816871 1.241985
lnco2_p	.4687057	.1529119	3.07	0.002	.1690039 .7684074
co2_d	-.7038658	.4600726	-1.53	0.126	-1.605592 .1978599
trend	-.0009233	.0001179	-7.83	0.000	-.0011543 -.0006922
tsin	-.0660595	.0462101	-1.43	0.153	-.1566296 .0245107
tcos	-.3765262	.0991057	-3.80	0.000	-.5707699 -.1822826
_cons	-7.53547	2.307439	-3.27	0.001	-12.05797 -3.012974

Instrumented: lngen\_dk1\_thermal  
 Instruments: lnpcoal lnco2\_p co2\_d trend tsin tcos dwkday lnheatdeg\_cph  
 lnheatdeg\_cph\_2 dksumm  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(4,1452)	Prob > F
lngen_dk1~1	0.5264	0.5231	0.2632	66.0958	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
 Ho: variables are exogenous

HAC score chi2(1) = 1.64042 (p = 0.2003)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1454) = 1.64476 (p = 0.1999)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(3) = 8.90225 (p = 0.0306)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Supply Thermal Power DK1 hour: 4  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(7) = 83.57  
 Prob > chi2 = 0.0000  
 R-squared = 0.1347  
 Root MSE = 1.0295

lnprice_dk1	Coef.	HAC Std. Err.	z	P> z	[95% Conf. Interval]
lngen_dk1~1	1.437234	.2699368	5.32	0.000	.9081678 1.966301
lnpcoal	.6781384	.3390162	2.00	0.045	.0136789 1.342598
lnco2_p	.4297569	.1738707	2.47	0.013	.0889765 .7705373
co2_d	-.5292793	.5283201	-1.00	0.316	-1.564768 .506209
trend	-.0010295	.0001327	-7.76	0.000	-.0012896 -.0007694
tsin	-.0738724	.0507495	-1.46	0.145	-.1733397 .0255949
tcos	-.4338593	.1051103	-4.13	0.000	-.6398717 -.2278469
_cons	-8.955234	2.436109	-3.68	0.000	-13.72992 -4.180548

Instrumented: lngen\_dk1\_thermal  
 Instruments: lnpcoal lnco2\_p co2\_d trend tsin tcos dwkday lnheatdeg\_cph  
 lnheatdeg\_cph\_2 dksumm  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(4,1452)	Prob > F
lngen_dk1~1	0.5437	0.5405	0.2873	82.5209	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
 Ho: variables are exogenous

HAC score chi2(1) = .847592 (p = 0.3572)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1454) = .828743 (p = 0.3628)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(3) = 15.5179 (p = 0.0014)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Supply Thermal Power DK1 hour: 5  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(7) = 78.27  
 Prob > chi2 = 0.0000  
 R-squared = 0.1397  
 Root MSE = 1.0297

lnprice_dk1	Coef.	HAC Std. Err.	z	P> z	[95% Conf. Interval]	
lngen_dk1_-1	1.624088	.285754	5.68	0.000	1.06402	2.184155
lnpcoal	.7580203	.3239124	2.34	0.019	.1231637	1.392877
lnco2_p	.4986836	.1805042	2.76	0.006	.1449019	.8524653
co2_d	-.7385312	.5503349	-1.34	0.180	-1.817168	-.3401054
trend	-.0010496	.0001402	-7.48	0.000	-.0013244	-.0007748
tsin	-.0986617	.0514778	-1.92	0.055	-.1995563	-.0022328
tcos	-.4749048	.11109	-4.27	0.000	-.6926371	-.2571724
_cons	-10.59653	2.477405	-4.28	0.000	-15.45216	-5.740909

Instrumented: lngen\_dk1\_thermal  
 Instruments: lnpcoal lnco2\_p co2\_d trend tsin tcos dwkday lnheatdeg\_cph  
 lnheatdeg\_cph\_2 dksumm  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(4,1452)	Prob > F
lngen_dk1_-1	0.5545	0.5514	0.2937	93.1325	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
 Ho: variables are exogenous

HAC score chi2(1) = 1.98306 (p = 0.1591)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1454) = 1.85782 (p = 0.1731)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(3) = 25.4026 (p = 0.0000)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Supply Thermal Power DK1 hour: 6  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(7) = 70.84  
 Prob > chi2 = 0.0000  
 R-squared = 0.1426  
 Root MSE = .91786

lnprice_dk1	Coef.	HAC Std. Err.	z	P> z	[95% Conf. Interval]	
lngen_dk1_-1	1.562198	.261041	5.98	0.000	1.050567	2.073829
lnpcoal	.9017873	.2952376	3.05	0.002	.3231322	1.480442
lnco2_p	.4786329	.1600527	2.99	0.003	.1649354	.7923305
co2_d	-.6962381	.4957684	-1.40	0.160	-1.667926	.2754501
trend	-.0009375	.0001314	-7.13	0.000	-.001195	-.0006799
tsin	-.1111207	.043432	-2.56	0.011	-.1962459	-.0259955
tcos	-.4285617	.1058669	-4.05	0.000	-.636057	-.2210664
_cons	-10.84014	2.324736	-4.66	0.000	-15.39654	-6.283737

Instrumented: lngen\_dk1\_thermal  
 Instruments: lnpcoal lnco2\_p co2\_d trend tsin tcos dwkday lnheatdeg\_cph  
 lnheatdeg\_cph\_2 dksumm  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(4,1452)	Prob > F
lngen_dk1_-1	0.5678	0.5648	0.3308	137.841	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
 Ho: variables are exogenous

HAC score chi2(1) = 4.32393 (p = 0.0376)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1454) = 4.20115 (p = 0.0406)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(3) = 27.4559 (p = 0.0000)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Supply Thermal Power DK1 hour: 7  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(7) = 175.41  
 Prob > chi2 = 0.0000  
 R-squared = 0.2151  
 Root MSE = .8256

lnprice_dkl	HAC		z	P> z	[95% Conf. Interval]	
	Coef.	Std. Err.				
lngen_dkl_~1	1.550383	.171853	9.02	0.000	1.213557	1.887208
lnpcoal	.8056395	.2719717	2.96	0.003	.2725848	1.338694
lnco2_p	.3053154	.1455397	2.10	0.036	.0200629	.5905679
co2_d	-.2710535	.4338627	-0.62	0.532	-1.121409	.5793016
trend	-.0007223	.0001122	-6.44	0.000	-.0009422	-.0005024
tsin	-.1707821	.0343	-4.98	0.000	-.2380088	-.1035554
tcos	-.4047064	.0863592	-4.69	0.000	-.5739673	-.2354455
_cons	-10.7858	1.40942	-7.65	0.000	-13.54822	-8.023389

Instrumented: lngen\_dkl\_thermal  
 Instruments: lnpcoal lnco2\_p co2\_d trend tsin tcos dwkday lnheatdeg\_cph  
 lnheatdeg\_cph\_2 dksumm  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(4,1452)	Prob > F
lngen_dkl_~1	0.6495	0.6471	0.5116	315.443	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity

Ho: variables are exogenous

HAC score chi2(1) = 13.1633 (p = 0.0003)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1454) = 12.5637 (p = 0.0004)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(3) = 18.8307 (p = 0.0003)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Supply Thermal Power DK1 hour: 8  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(7) = 275.86  
 Prob > chi2 = 0.0000  
 R-squared = 0.2853  
 Root MSE = .67552

lnprice_dkl	HAC		z	P> z	[95% Conf. Interval]	
	Coef.	Std. Err.				
lngen_dkl_~1	1.229707	.1015266	12.11	0.000	1.030718	1.428695
lnpcoal	.9138394	.1713752	5.33	0.000	.5779502	1.249729
lnco2_p	.2483527	.1188547	2.09	0.037	.0154017	.4813037
co2_d	-.0244329	.3616027	-0.07	0.946	-.7331612	.6842954
trend	-.0005686	.0000858	-6.63	0.000	-.0007368	-.0004004
tsin	-.192471	.0298563	-6.45	0.000	-.2509883	-.1339537
tcos	-.2404373	.0507715	-4.74	0.000	-.3399477	-.1409269
_cons	-9.087446	1.041194	-8.73	0.000	-11.12815	-7.046743

Instrumented: lngen\_dkl\_thermal  
 Instruments: lnpcoal lnco2\_p co2\_d trend tsin tcos dwkday lnheatdeg\_cph  
 lnheatdeg\_cph\_2 dksumm  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(4,1452)	Prob > F
lngen_dkl_~1	0.7056	0.7036	0.6364	414.241	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity

Ho: variables are exogenous

HAC score chi2(1) = 8.8237 (p = 0.0030)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1454) = 8.72994 (p = 0.0032)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(3) = 11.9682 (p = 0.0075)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Supply Thermal Power DK1 hour: 9  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(7) = 463.16  
 Prob > chi2 = 0.0000  
 R-squared = 0.2919  
 Root MSE = .52665



lnprice_dk1	HAC		z	P> z	[95% Conf. Interval]	
	Coef.	Std. Err.				
lngen_dk1_~1	.9247519	.0699618	13.22	0.000	.7876293	1.061874
lnpcoal	.8158436	.1251719	6.52	0.000	.5705111	1.061176
lnco2_p	.2881763	.0994646	2.90	0.004	.0932293	.4831232
co2_d	-.1712615	.293974	-0.58	0.560	-.7474399	.4049169
trend	-.000503	.0000607	-8.29	0.000	-.0006219	-.000384
tsin	-.1306658	.0242815	-5.38	0.000	-.1782566	-.083075
tcos	-.1401894	.035894	-3.91	0.000	-.2105404	-.0698385
_cons	-6.43154	.6597394	-9.75	0.000	-7.724605	-5.138474

Instrumented: lngen\_dk1\_thermal  
 Instruments: lnpcoal lnco2\_p co2\_d trend tsin tcos dwkday lnheatdeg\_cph  
 lnheatdeg\_cph\_2 dksumm  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(4,1452)	Prob > F
lngen_dk1_~1	0.6895	0.6874	0.6315	375.634	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity

Ho: variables are exogenous

HAC score chi2(1) = 4.19112 (p = 0.0406)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1454) = 4.0064 (p = 0.0455)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(3) = 7.47209 (p = 0.0583)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Supply Thermal Power DK1 hour: 10  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(7) = 497.24  
 Prob > chi2 = 0.0000  
 R-squared = 0.3256  
 Root MSE = .44197

lnprice_dk1	HAC		z	P> z	[95% Conf. Interval]	
	Coef.	Std. Err.				
lngen_dk1_~1	.8152804	.0665005	12.26	0.000	.6849417	.945619
lnpcoal	.8323482	.1017949	8.18	0.000	.6328339	1.031862
lnco2_p	.3450741	.0873422	3.95	0.000	.1738866	.5162616
co2_d	-.3093417	.2535869	-1.22	0.223	-.8063628	.1876795
trend	-.0005224	.0000543	-9.62	0.000	-.0006289	-.000416
tsin	-.1390209	.0228809	-6.08	0.000	-.1838667	-.0941752
tcos	-.120732	.0288545	-4.18	0.000	-.1772857	-.0641783
_cons	-5.63005	.6409426	-8.78	0.000	-6.886274	-4.373825

Instrumented: lngen\_dk1\_thermal  
 Instruments: lnpcoal lnco2\_p co2\_d trend tsin tcos dwkday lnheatdeg\_cph  
 lnheatdeg\_cph\_2 dksumm  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(4,1452)	Prob > F
lngen_dk1_~1	0.6405	0.6380	0.5737	288.014	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity

Ho: variables are exogenous

HAC score chi2(1) = 4.56058 (p = 0.0327)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1454) = 4.23835 (p = 0.0397)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(3) = 2.2899 (p = 0.5145)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Supply Thermal Power DK1 hour: 11  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(7) = 324.46  
 Prob > chi2 = 0.0000  
 R-squared = 0.3613  
 Root MSE = .39643

lnprice_dk1	HAC				
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
lngen_dk1_~1	.75325	.0589908	12.77	0.000	.6376302 .8688699
lnpcoal	.8288447	.0986688	8.40	0.000	.6354575 1.022232
lnco2_p	.3560071	.0838468	4.25	0.000	.1916704 .5203437
co2_d	-.3084091	.2571347	-1.20	0.230	-.812384 .1955657
trend	-.0005043	.0000579	-8.70	0.000	-.0006179 -.0003907
tsin	-.1603831	.0221639	-7.24	0.000	-.2038234 -.1169427
tcos	-.1205397	.0250175	-4.82	0.000	-.1695732 -.0715062
_cons	-5.164689	.6963033	-7.42	0.000	-6.529418 -3.799959

Instrumented: lngen\_dk1\_thermal  
 Instruments: lnpcoal lnco2\_p co2\_d trend tsin tcos dwkday lnheatdeg\_cph  
 lnheatdeg\_cph\_2 dksumm  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(4,1452)	Prob > F
lngen_dk1_~1	0.6133	0.6107	0.5400	239.978	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity

Ho: variables are exogenous

HAC score chi2(1) = 6.82771 (p = 0.0090)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1454) = 6.15239 (p = 0.0132)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(3) = 7.46493 (p = 0.0585)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Supply Thermal Power DK1 hour: 12  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(7) = 342.70  
 Prob > chi2 = 0.0000  
 R-squared = 0.3513  
 Root MSE = .41184

lnprice_dk1	HAC				
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
lngen_dk1_~1	.7535303	.0611861	12.32	0.000	.6336077 .8734528
lnpcoal	.8707644	.1027131	8.48	0.000	.6694505 1.072078
lnco2_p	.3781216	.0872547	4.33	0.000	.2071055 .5491377
co2_d	-.3246068	.2671959	-1.21	0.224	-.8483011 .1990876
trend	-.000553	.0000605	-9.14	0.000	-.0006716 -.0004343
tsin	-.180237	.0230754	-7.81	0.000	-.225464 -.13501
tcos	-.150115	.0262422	-5.72	0.000	-.2015489 -.0986812
_cons	-5.273261	.7164963	-7.36	0.000	-6.677568 -3.868954

Instrumented: lngen\_dk1\_thermal  
 Instruments: lnpcoal lnco2\_p co2\_d trend tsin tcos dwkday lnheatdeg\_cph  
 lnheatdeg\_cph\_2 dksumm  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(4,1452)	Prob > F
lngen_dk1_~1	0.5972	0.5944	0.5144	216.384	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity

Ho: variables are exogenous

HAC score chi2(1) = 7.56272 (p = 0.0060)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1454) = 6.97448 (p = 0.0084)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(3) = 12.3839 (p = 0.0062)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Supply Thermal Power DK1 hour: 13  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(7) = 377.56  
 Prob > chi2 = 0.0000  
 R-squared = 0.3056  
 Root MSE = .42891

lnprice_dkl	HAC				
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
lngen_dkl_~1	.6863464	.0629237	10.91	0.000	.5630182 .8096746
lnpcoal	.7494057	.1065407	7.03	0.000	.5405897 .9582216
lnco2_p	.4291398	.0862338	4.98	0.000	.2601246 .598155
co2_d	-.5384417	.2619343	-2.06	0.040	-1.051824 -.0250599
trend	-.0005311	.0000568	-9.35	0.000	-.0006424 -.0004198
tsin	-.1693967	.0223143	-7.59	0.000	-.2131319 -.1256615
tcos	-.1388651	.0294476	-4.72	0.000	-.1965813 -.0811488
_cons	-4.315464	.6780128	-6.36	0.000	-5.644344 -2.986583

Instrumented: lngen\_dkl\_thermal  
 Instruments: lnpcoal lnco2\_p co2\_d trend tsin tcos dwkday lnheatdeg\_cph  
 lnheatdeg\_cph\_2 dksumm  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(4,1452)	Prob > F
lngen_dkl_~1	0.5918	0.5890	0.4986	209.406	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity

Ho: variables are exogenous

HAC score chi2(1) = 3.87881 (p = 0.0489)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1454) = 3.63559 (p = 0.0568)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(3) = 8.79885 (p = 0.0321)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Supply Thermal Power DK1 hour: 14  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(7) = 453.07  
 Prob > chi2 = 0.0000  
 R-squared = 0.3190  
 Root MSE = .42504

lnprice_dkl	HAC				
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
lngen_dkl_~1	.7385569	.0587666	12.57	0.000	.6233765 .8537373
lnpcoal	.726348	.1052787	6.90	0.000	.5200055 .9326904
lnco2_p	.4281511	.0879583	4.87	0.000	.2557561 .6005461
co2_d	-.5486315	.2675771	-2.05	0.040	-1.073073 -.0241899
trend	-.0005388	.0000563	-9.57	0.000	-.0006491 -.0004285
tsin	-.1694991	.0219539	-7.72	0.000	-.2125279 -.1264703
tcos	-.1523501	.0296894	-5.13	0.000	-.2105403 -.0941599
_cons	-4.625684	.6244777	-7.41	0.000	-5.849637 -3.40173

Instrumented: lngen\_dkl\_thermal  
 Instruments: lnpcoal lnco2\_p co2\_d trend tsin tcos dwkday lnheatdeg\_cph  
 lnheatdeg\_cph\_2 dksumm  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(4,1452)	Prob > F
lngen_dkl_~1	0.6087	0.6060	0.5145	217.563	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity

Ho: variables are exogenous

HAC score chi2(1) = 7.47634 (p = 0.0063)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1454) = 7.24155 (p = 0.0072)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(3) = 11.2292 (p = 0.0105)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Supply Thermal Power DK1 hour: 15  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(7) = 435.89  
 Prob > chi2 = 0.0000  
 R-squared = 0.2814  
 Root MSE = .47536

lnprice_dk1	HAC					
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
lngen_dk1~1	.8065297	.0684773	11.78	0.000	.6723166	.9407428
lnpcoal	.6914558	.1249586	5.53	0.000	.4465414	.9363702
lnco2_p	.3961919	.0912058	4.34	0.000	.2174318	.574952
co2_d	-.4677987	.2769919	-1.69	0.091	-1.010693	.0750954
trend	-.0005404	.0000558	-9.69	0.000	-.0006497	-.0004311
tsin	-.1772251	.0219884	-8.06	0.000	-.2203216	-.1341285
tcos	-.1814612	.0365322	-4.97	0.000	-.253063	-.1098593
_cons	-5.020605	.6583786	-7.63	0.000	-6.311003	-3.730207

Instrumented: lngen\_dk1\_thermal  
 Instruments: lnpcoal lnco2\_p co2\_d trend tsin tcos dwkday lnheatdeg\_cph  
 lnheatdeg\_cph\_2 dksumm  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(4,1452)	Prob > F
lngen_dk1~1	0.6220	0.6194	0.5119	216.922	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity

Ho: variables are exogenous

HAC score chi2(1) = 11.3136 (p = 0.0008)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1454) = 11.2602 (p = 0.0008)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(3) = 7.70264 (p = 0.0526)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Supply Thermal Power DK1 hour: 16  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(7) = 380.89  
 Prob > chi2 = 0.0000  
 R-squared = 0.2738  
 Root MSE = .48987

lnprice_dk1	HAC					
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
lngen_dk1~1	.8199922	.0729697	11.24	0.000	.6769741	.9630103
lnpcoal	.7418881	.1264339	5.87	0.000	.4940822	.9896939
lnco2_p	.3867147	.0979334	3.95	0.000	.1947689	.5786605
co2_d	-.4245446	.2968031	-1.43	0.153	-1.006268	.1571787
trend	-.0005793	.0000556	-10.41	0.000	-.0006883	-.0004702
tsin	-.1919653	.0228188	-8.41	0.000	-.2366894	-.1472412
tcos	-.1756695	.038139	-4.61	0.000	-.2504206	-.1009183
_cons	-5.280737	.7199465	-7.33	0.000	-6.691807	-3.869668

Instrumented: lngen\_dk1\_thermal  
 Instruments: lnpcoal lnco2\_p co2\_d trend tsin tcos dwkday lnheatdeg\_cph  
 lnheatdeg\_cph\_2 dksumm  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(4,1452)	Prob > F
lngen_dk1~1	0.6327	0.6302	0.5005	227.472	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity

Ho: variables are exogenous

HAC score chi2(1) = 6.01411 (p = 0.0142)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1454) = 5.7706 (p = 0.0164)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(3) = 9.36907 (p = 0.0248)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Supply Thermal Power DK1 hour: 17  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(7) = 483.65  
 Prob > chi2 = 0.0000  
 R-squared = 0.3667  
 Root MSE = .38386

lnprice_dk1	HAC					
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
lngen_dk1_~1	.8032223	.0651553	12.33	0.000	.6755202	.9309243
lnpcoal	.789278	.0930153	8.49	0.000	.6069713	.9715846
lnco2_p	.4470276	.0975148	4.58	0.000	.2559022	.6381531
co2_d	-.6241089	.292525	-2.13	0.033	-1.197447	-.0507704
trend	-.0005638	.0000523	-10.78	0.000	-.0006663	-.0004613
tsin	-.207736	.0217448	-9.55	0.000	-.250355	-.165117
tcos	-.1446453	.0274279	-5.27	0.000	-.198403	-.0908876
_cons	-5.332912	.6896975	-7.73	0.000	-6.684695	-3.98113

Instrumented: lngen\_dk1\_thermal  
 Instruments: lnpcoal lnco2\_p co2\_d trend tsin tcos dwkday lnheatdeg\_cph  
 lnheatdeg\_cph\_2 dksumm  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(4,1452)	Prob > F
lngen_dk1_~1	0.6498	0.6474	0.4802	225.177	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity

Ho: variables are exogenous

HAC score chi2(1) = 9.11267 (p = 0.0025)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1454) = 7.7663 (p = 0.0054)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(3) = 6.52516 (p = 0.0887)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Supply Thermal Power DK1 hour: 18  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(7) = 383.99  
 Prob > chi2 = 0.0000  
 R-squared = 0.4921  
 Root MSE = .27482

lnprice_dk1	HAC					
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
lngen_dk1_~1	.6189381	.055099	11.23	0.000	.5109461	.7269302
lnpcoal	.7322983	.0901393	8.12	0.000	.5556286	.908968
lnco2_p	.4869541	.0558663	8.72	0.000	.3774581	.59645
co2_d	-.7881114	.1693424	-4.65	0.000	-1.120016	-.4562065
trend	-.0004781	.0000515	-9.28	0.000	-.0005791	-.0003772
tsin	-.183206	.0189115	-9.69	0.000	-.2202719	-.1461402
tcos	-.0239158	.0188156	-1.27	0.204	-.0607937	-.0129621
_cons	-3.720641	.6138009	-6.06	0.000	-4.923669	-2.517613

Instrumented: lngen\_dk1\_thermal  
 Instruments: lnpcoal lnco2\_p co2\_d trend tsin tcos dwkday lnheatdeg\_cph  
 lnheatdeg\_cph\_2 dksumm  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(4,1452)	Prob > F
lngen_dk1_~1	0.6599	0.6576	0.4509	209.7	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity

Ho: variables are exogenous

HAC score chi2(1) = 3.47441 (p = 0.0623)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1454) = 3.4753 (p = 0.0625)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(3) = 4.99943 (p = 0.1718)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Supply Thermal Power DK1 hour: 19  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(7) = 433.22  
 Prob > chi2 = 0.0000  
 R-squared = 0.5089  
 Root MSE = .2508

lnprice_dk1	HAC				
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
lngen_dk1_~1	.5123477	.0505052	10.14	0.000	.4133594 .611336
lnpcoal	.8106293	.0826951	9.80	0.000	.6485498 .9727087
lnco2_p	.4218619	.0572894	7.36	0.000	.3095767 .5341471
co2_d	-.5414578	.1819044	-2.98	0.003	-.8979838 -.1849317
trend	-.0005251	.0000515	-10.20	0.000	-.0006261 -.0004242
tsin	-.1731355	.0179795	-9.63	0.000	-.2083747 -.1378962
tcos	-.0006304	.0183651	-0.03	0.973	-.0366254 .0353646
_cons	-3.150885	.5507408	-5.72	0.000	-4.230318 -2.071453

Instrumented: lngen\_dk1\_thermal  
 Instruments: lnpcoal lnco2\_p co2\_d trend tsin tcos dwkday lnheatdeg\_cph  
 lnheatdeg\_cph\_2 dksumm  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(4,1452)	Prob > F
lngen_dk1_~1	0.6388	0.6364	0.3981	179.967	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity

Ho: variables are exogenous

HAC score chi2(1) = .907469 (p = 0.3408)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1454) = .946166 (p = 0.3309)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(3) = 2.76337 (p = 0.4296)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Supply Thermal Power DK1 hour: 20  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(7) = 544.87  
 Prob > chi2 = 0.0000  
 R-squared = 0.5517  
 Root MSE = .22804

lnprice_dk1	HAC				
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
lngen_dk1_~1	.4552359	.0454181	10.02	0.000	.366218 .5442538
lnpcoal	.7898688	.0775511	10.19	0.000	.6378715 .9418661
lnco2_p	.4223527	.065396	6.46	0.000	.2941789 .5505265
co2_d	-.5365701	.2024847	-2.65	0.008	-.9334328 -.1397074
trend	-.0005314	.0000545	-9.74	0.000	-.0006383 -.0004245
tsin	-.1862007	.0179065	-10.40	0.000	-.2212967 -.1511047
tcos	-.0117514	.0204177	-0.58	0.565	-.0517694 .0282666
_cons	-2.65272	.4716813	-5.62	0.000	-3.577198 -1.728241

Instrumented: lngen\_dk1\_thermal  
 Instruments: lnpcoal lnco2\_p co2\_d trend tsin tcos dwkday lnheatdeg\_cph  
 lnheatdeg\_cph\_2 dksumm  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(4,1452)	Prob > F
lngen_dk1_~1	0.6291	0.6265	0.3841	163.131	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity

Ho: variables are exogenous

HAC score chi2(1) = .193506 (p = 0.6600)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1454) = .194969 (p = 0.6589)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(3) = 3.97453 (p = 0.2642)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Supply Thermal Power DK1 hour: 21  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(7) = 774.84  
 Prob > chi2 = 0.0000  
 R-squared = 0.5309  
 Root MSE = .22575

lnprice_dk1	HAC				
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
lngen_dk1_~1	.4223133	.0417589	10.11	0.000	.3404674 .5041592
lnpcoal	.747424	.0821666	9.10	0.000	.5863803 .9084677
lnco2_p	.4780999	.0622292	7.68	0.000	.3561329 .6000668
co2_d	-.7158188	.1921219	-3.73	0.000	-1.092371 -.3392668
trend	-.0005525	.0000549	-10.06	0.000	-.0006601 -.0004449
tsin	-.1717184	.0170342	-10.08	0.000	-.2051048 -.1383321
tcos	-.0360114	.0234644	-1.53	0.125	-.0820008 .0099779
_cons	-2.210407	.4017093	-5.50	0.000	-2.997743 -1.423071

Instrumented: lngen\_dk1\_thermal  
 Instruments: lnpcoal lnco2\_p co2\_d trend tsin tcos dwkday lnheatdeg\_cph  
 lnheatdeg\_cph\_2 dksumm  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(4,1452)	Prob > F
lngen_dk1_~1	0.5954	0.5926	0.3567	153.253	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity

Ho: variables are exogenous

HAC score chi2(1) = .409655 (p = 0.5221)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1454) = .424785 (p = 0.5147)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(3) = 9.94346 (p = 0.0191)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Supply Thermal Power DK1 hour: 22  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(7) = 415.57  
 Prob > chi2 = 0.0000  
 R-squared = 0.2958  
 Root MSE = .36074

lnprice_dk1	HAC				
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
lngen_dk1_~1	.4865803	.0716561	6.79	0.000	.346137 .6270236
lnpcoal	.7441295	.1187732	6.27	0.000	.5113383 .9769208
lnco2_p	.4763522	.0641742	7.42	0.000	.3505731 .6021313
co2_d	-.7185336	.2088428	-3.44	0.001	-1.127858 -.3092092
trend	-.0005854	.0000578	-10.13	0.000	-.0006986 -.0004722
tsin	-.1380494	.016484	-8.37	0.000	-.1703574 -.1057414
tcos	-.0826865	.0383837	-2.15	0.031	-.1579172 -.0074558
_cons	-2.646378	.6167851	-4.29	0.000	-3.855254 -1.437501

Instrumented: lngen\_dk1\_thermal  
 Instruments: lnpcoal lnco2\_p co2\_d trend tsin tcos dwkday lnheatdeg\_cph  
 lnheatdeg\_cph\_2 dksumm  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(4,1452)	Prob > F
lngen_dk1_~1	0.5375	0.5344	0.3013	114.731	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity

Ho: variables are exogenous

HAC score chi2(1) = .025604 (p = 0.8729)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1454) = .023359 (p = 0.8785)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(3) = 9.44525 (p = 0.0239)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Supply Thermal Power DK1 hour: 23  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(7) = 445.02  
 Prob > chi2 = 0.0000  
 R-squared = 0.2719  
 Root MSE = .35802

lnprice_dkl	HAC				
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
lngen_dkl_~1	.3679584	.0631909	5.82	0.000	.2441066 .4918103
lnpcoal	.7018398	.113549	6.18	0.000	.4792878 .9243918
lnco2_p	.5110763	.0553249	9.24	0.000	.4026414 .6195111
co2_d	-.8471741	.1788979	-4.74	0.000	-1.197808 -.4965406
trend	-.0005937	.000054	-11.00	0.000	-.0006995 -.0004879
tsin	-.1059577	.0149985	-7.06	0.000	-.1353542 -.0765613
tcos	-.0565928	.034813	-1.63	0.104	-.1248251 -.0116395
_cons	-1.571919	.5329581	-2.95	0.003	-2.616498 -.5273407

Instrumented: lngen\_dkl\_thermal  
 Instruments: lnpcoal lnco2\_p co2\_d trend tsin tcos dwkday lnheatdeg\_cph  
 lnheatdeg\_cph\_2 dksumm  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(4,1452)	Prob > F
lngen_dkl_~1	0.5073	0.5039	0.2769	94.4674	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity

Ho: variables are exogenous

HAC score chi2(1) = 2.96909 (p = 0.0849)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1454) = 3.1308 (p = 0.0770)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(3) = 3.84781 (p = 0.2784)  
 (Prewhitening performed with 1 lag)

\*\*\*\*\*  
 \* Supply Thermal Power DK1 hour: 24  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(7) = 218.20  
 Prob > chi2 = 0.0000  
 R-squared = 0.1481  
 Root MSE = .52954

lnprice_dkl	HAC				
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
lngen_dkl_~1	.5018268	.1093887	4.59	0.000	.2874288 .7162248
lnpcoal	.5854314	.1747159	3.35	0.001	.2429945 .9278684
lnco2_p	.4431943	.0711885	6.23	0.000	.3036674 .5827212
co2_d	-.7114165	.2294922	-3.10	0.002	-1.161213 -.2616201
trend	-.0006502	.0000637	-10.20	0.000	-.0007751 -.0005253
tsin	-.0667463	.0195963	-3.41	0.001	-.1051544 -.0283382
tcos	-.1136186	.0500874	-2.27	0.023	-.2117881 -.015449
_cons	-2.050354	1.008669	-2.03	0.042	-4.027309 -.0733995

Instrumented: lngen\_dkl\_thermal  
 Instruments: lnpcoal lnco2\_p co2\_d trend tsin tcos dwkday lnheatdeg\_cph  
 lnheatdeg\_cph\_2 dksumm  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(4,1452)	Prob > F
lngen_dkl_~1	0.5196	0.5163	0.2696	76.9874	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity

Ho: variables are exogenous

HAC score chi2(1) = .696705 (p = 0.4039)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1454) = .684582 (p = 0.4081)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(3) = 3.49472 (p = 0.3214)  
 (Prewhitening performed with 1 lag)

```

179
180 di _newline

181
182 forvalues h = 1/24 {
183   di _newline
184   di "*****"
185   di "*" Demand DK1 hour: " `h' "
186   di "*****"
187   di _newline
188 }
189 preserve
190 keep if hour=="h" & idz
191 sort date
192 tsset date, daily
193 tsreport, report report0 list
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184 ivregress 2sls lncons_dk1 lnheatdeg_cph lnheatdeg_cph_2 dwkday dksumm trend tsi
> n tcos ///
> (lnprice_dk1 = lnpccoal lnco2_p co2_d), ///
> vce(hac bartlett 7)
13.
185 di _newline
14. estat first
15.
186 di _newline
16. estat endog
17.
187 di _newline
18. estat overid
19.
188 //
189 // impose NO price effect!
190 //
191 di _newline
20. newey lncons_dk1 lnheatdeg_cph lnheatdeg_cph_2 dwkday dksumm trend tsin tcos
> , lag(7)
21.
192 restore
22. }
    
```

```

*****
* Demand DK1 hour: 1
*****
    
```

```

(33649 observations deleted)
time variable: date, 12.04.2004 to 13.04.2008
delta: 1 day
    
```

Number of gaps in sample: 0

```

Instrumental variables (2SLS) regression
Number of obs = 1463
Wald chi2(8) = 2142.22
Prob > chi2 = 0.0000
R-squared = 0.5342
Root MSE = .05792
    
```

lncons_dk1	HAC		z	P> z	[95% Conf. Interval]	
	Coef.	Std. Err.				
lnprice_dk1	-.0136373	.0185649	-0.73	0.463	-.0500239	.0227493
lnheatdeg_h	-.0771692	.0121401	-6.36	0.000	-.1009634	-.0533751
lnheatde_h_2	.0281314	.0051155	5.50	0.000	.0181051	.0381576
dwkday	.0983934	.003743	26.29	0.000	.0910572	.1057295
dksumm	-.0350243	.0109425	-3.20	0.001	-.0564712	-.0135774
trend	.0000168	5.71e-06	2.95	0.003	5.64e-06	.000028
tsin	.0169832	.0052584	3.23	0.001	.006677	.0272894
tcos	.0294192	.0094599	3.11	0.002	.0108781	.0479603
_cons	7.532627	.0591396	127.37	0.000	7.416715	7.648538

```

Instrumented: lnprice_dk1
Instruments: lnheatdeg_cph lnheatdeg_cph_2 dwkday dksumm trend tsin tcos
lnpccoal lnco2_p co2_d
HAC VCE: Bartlett kernel with 7 lags
    
```

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(3,1452)	Prob > F
lnprice_dk1	0.0635	0.0571	0.0213	17.9638	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
Ho: variables are exogenous

HAC score chi2(1) = 1.27576 (p = 0.2587)  
(Prewhitening performed with 1 lag)

HAC regression F(1,1453) = 1.23409 (p = 0.2668)  
(Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(2) = 1.61467 (p = 0.4460)  
(Prewhitening performed with 1 lag)

```

Regression with Newey-West standard errors
maximum lag: 7
Number of obs = 1463
F( 7, 1455) = 355.62
Prob > F = 0.0000
    
```

lncons_dk1	Newey-West		t	P> t	[95% Conf. Interval]	
	Coef.	Std. Err.				
lnheatdeg_h	-.0710949	.0093212	-7.63	0.000	-.0893792	-.0528105
lnheatde_h_2	.0251132	.0031274	8.03	0.000	.0189785	.0312479
dwkday	.0963795	.0022766	42.34	0.000	.0919138	.1008453
dksumm	-.0329328	.0104948	-3.14	0.002	-.0535194	-.0123462
trend	.0000171	5.36e-06	3.19	0.001	6.59e-06	.0000276
tsin	.0197562	.0036414	5.43	0.000	.0126132	.0268992
tcos	.035209	.0053061	6.64	0.000	.0248005	.0456175
_cons	7.490508	.0131077	571.46	0.000	7.464796	7.51622

```

*****
* Demand DK1 hour: 2
*****
    
```

```

(33649 observations deleted)
time variable: date, 12.04.2004 to 13.04.2008
delta: 1 day
    
```

Number of gaps in sample: 0

```

Instrumental variables (2SLS) regression
Number of obs = 1463
Wald chi2(8) = 2393.92
Prob > chi2 = 0.0000
R-squared = 0.5597
Root MSE = .0594
    
```

lncons_dk1	HAC		z	P> z	[95% Conf. Interval]	
	Coef.	Std. Err.				
lnprice_dk1	-.0168669	.018788	-0.90	0.369	-.0536907	.0199569
lnheatdeg_h	-.0849222	.0128565	-6.61	0.000	-.1101206	-.0597239
lnheatde_h_2	.0309796	.0054041	5.73	0.000	.0203877	.0415715
dwkday	.1136672	.0052949	21.47	0.000	.1032894	.1240449
dksumm	-.0392539	.0112118	-3.50	0.000	-.0612287	-.0172791
trend	.0000157	6.33e-06	2.48	0.013	3.29e-06	.0000281
tsin	.0175121	.0049018	3.57	0.000	.0079047	.0271195
tcos	.0281012	.0093161	3.02	0.003	.0098419	.0463604
_cons	7.492103	.0593944	126.14	0.000	7.375692	7.608514

```

Instrumented: lnprice_dk1
Instruments: lnheatdeg_cph lnheatdeg_cph_2 dwkday dksumm trend tsin tcos
lnpccoal lnco2_p co2_d
HAC VCE: Bartlett kernel with 7 lags
    
```

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(3,1452)	Prob > F
lnprice_dk1	0.0754	0.0690	0.0228	16.4705	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
Ho: variables are exogenous

HAC score chi2(1) = 1.95122 (p = 0.1625)  
(Prewhitening performed with 1 lag)

HAC regression F(1,1453) = 1.7926 (p = 0.1808)  
(Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(2) = 1.55311 (p = 0.4600)  
(Prewhitening performed with 1 lag)

Regression with Newey-West standard errors  
maximum lag: 7  
Number of obs = 1463  
F( 7, 1455) = 433.27  
Prob > F = 0.0000

lncons_dk1	Coef.	Newey-West Std. Err.	t	P> t	[95% Conf. Interval]	
lnheatdeg_h	-.0765178	.0092504	-8.27	0.000	-.0946634	-.0583722
lnheatde_h_2	.0269866	.0031641	8.53	0.000	.02078	.0331932
dwkday	.1095865	.0023551	46.53	0.000	.1049666	.1142063
dksumm	-.0368196	.0107341	-3.43	0.001	-.0578755	-.0157637
trend	.000017	5.60e-06	3.04	0.002	6.04e-06	.000028
tsin	.0204046	.0037352	5.46	0.000	.0130776	.0277316
tcos	.0350708	.0055193	6.35	0.000	.0242441	.0458975
_cons	7.440306	.0133001	559.42	0.000	7.414217	7.466396

\*\*\*\*\*  
\* Demand DK1 hour: 3  
\*\*\*\*\*

(33649 observations deleted)  
time variable: date, 12.04.2004 to 13.04.2008  
delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
Number of obs = 1463  
Wald chi2(8) = 2997.25  
Prob > chi2 = 0.0000  
R-squared = 0.6146  
Root MSE = .05863

lncons_dk1	HAC				
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
lnprice_dk1	-.0135911	.018826	-0.72	0.470	-.0504893 .0233072
lnheatdeg_h	-.0870539	.0145514	-5.98	0.000	-.1155741 -.0585337
lnheatde_h_2	.0316255	.0058671	5.39	0.000	.0201262 .0431248
dwkday	.1282163	.0055631	23.05	0.000	.1173129 .1391198
dksumm	-.0401036	.0117742	-3.41	0.001	-.0631806 -.0170265
trend	.000014	6.99e-06	2.00	0.046	2.64e-07 .0000277
tsin	.0191211	.00434	4.41	0.000	.0106148 .0276275
tcos	.0293162	.0091975	3.19	0.001	.0112893 .047343
_cons	7.456493	.0612962	121.65	0.000	7.336355 7.576632

Instrumented: lnprice\_dk1  
Instruments: lnheatdeg\_cph lnheatdeg\_cph\_2 dwkday dksumm trend tsin tcos  
lnpcoal lnco2\_p co2\_d  
HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(3,1452)	Prob > F
lnprice_dk1	0.0834	0.0771	0.0230	15.5792	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
Ho: variables are exogenous

HAC score chi2(1) = 1.52429 (p = 0.2170)  
(Prewhitening performed with 1 lag)

HAC regression F(1,1453) = 1.37136 (p = 0.2418)  
(Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(2) = 1.91797 (p = 0.3833)  
(Prewhitening performed with 1 lag)

Regression with Newey-West standard errors  
maximum lag: 7  
Number of obs = 1463  
F( 7, 1455) = 515.97  
Prob > F = 0.0000

lncons_dk1	Coef.	Newey-West Std. Err.	t	P> t	[95% Conf. Interval]	
lnheatdeg_h	-.0794003	.0097884	-8.11	0.000	-.0986011	-.0601994
lnheatde_h_2	.0281181	.003292	8.54	0.000	.0216606	.0345756
dwkday	.1246153	.0024361	51.15	0.000	.1198368	.1293939
dksumm	-.0381812	.0112195	-3.40	0.001	-.0601894	-.016173
trend	.0000158	5.85e-06	2.70	0.007	4.30e-06	.0000272
tsin	.0208718	.0037068	5.63	0.000	.0136005	.0281432
tcos	.0351482	.0055491	6.33	0.000	.0242631	.0460333
_cons	7.414389	.0135474	547.29	0.000	7.387815	7.440964

\*\*\*\*\*  
\* Demand DK1 hour: 4  
\*\*\*\*\*

(33649 observations deleted)  
 time variable: **date, 12.04.2004 to 13.04.2008**  
 delta: **1 day**

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(8) = 4167.54  
 Prob > chi2 = 0.0000  
 R-squared = 0.6789  
 Root MSE = .05639

lncons_dkl	Coef.	HAC Std. Err.	z	P> z	[95% Conf. Interval]
lnprice_dkl	-.0052557	.0173148	-0.30	0.761	-.039192 .0286806
lnheatdeg_h	-.0871283	.0142986	-6.09	0.000	-.115153 -.0591037
lnheatde-h_2	.0311172	.0056009	5.56	0.000	.0201396 .0420948
dwkday	.1410507	.0066817	21.11	0.000	.1279547 .1541467
dksumm	-.0421487	.0118341	-3.56	0.000	-.0653432 -.0189542
trend	.0000175	7.38e-06	2.38	0.018	3.07e-06 .000032
tsin	.0201216	.0040259	5.00	0.000	.0122309 .0280122
tcos	.032497	.0089006	3.65	0.000	.0150521 .0499419
_cons	7.415347	.0566368	130.93	0.000	7.30434 7.526353

Instrumented: lnprice\_dkl  
 Instruments: lnheatdeg\_cph lnheatdeg\_cph\_2 dwkday dksumm trend tsin tcos  
 lnccoal lncco2\_p co2\_d  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(3,1452)	Prob > F
lnprice_dkl	0.0944	0.0882	0.0225	15.1998	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
 Ho: variables are exogenous

HAC score chi2(1) = .724594 (p = 0.3946)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1453) = .628045 (p = 0.4282)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(2) = 3.0866 (p = 0.2137)  
 (Prewhitening performed with 1 lag)

Regression with Newey-West standard errors  
 maximum lag: 7  
 Number of obs = 1463  
 F( 7, 1455) = 629.46  
 Prob > F = 0.0000

lncons_dkl	Coef.	Newey-West Std. Err.	t	P> t	[95% Conf. Interval]
lnheatdeg_h	-.0839505	.0098923	-8.49	0.000	-.1033552 -.0645458
lnheatde-h_2	.0296754	.0032762	9.06	0.000	.0232489 .036102
dwkday	.1391255	.0024372	57.08	0.000	.1343447 .1439062
dksumm	-.04133	.0113506	-3.64	0.000	-.0635952 -.0190647
trend	.0000186	5.99e-06	3.10	0.002	6.83e-06 .0000303
tsin	.0207978	.003674	5.66	0.000	.0135908 .0280048
tcos	.0349165	.005839	5.98	0.000	.0234627 .0463702
_cons	7.399231	.0140359	527.16	0.000	7.371698 7.426764

\*\*\*\*\*  
 \* Demand DK1 hour: 5  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: **date, 12.04.2004 to 13.04.2008**  
 delta: **1 day**

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(8) = 4803.66  
 Prob > chi2 = 0.0000  
 R-squared = 0.7200  
 Root MSE = .0577

lncons_dkl	Coef.	HAC Std. Err.	z	P> z	[95% Conf. Interval]
lnprice_dkl	-.006454	.0172825	-0.37	0.709	-.0403271 .027419
lnheatdeg_h	-.0839335	.0151714	-5.53	0.000	-.1136688 -.0541981
lnheatde-h_2	.0308677	.0059219	5.21	0.000	.0192611 .0424744
dwkday	.1630358	.0080733	20.19	0.000	.1472124 .1788591
dksumm	-.0400978	.0127136	-3.15	0.002	-.065016 -.0151796
trend	.0000213	7.60e-06	2.80	0.005	6.39e-06 .0000362
tsin	.0175372	.0042939	4.08	0.000	.0091214 .025953
tcos	.0393146	.0095543	4.11	0.000	.0205885 .0580407
_cons	7.405482	.0561228	131.95	0.000	7.295483 7.51548

Instrumented: lnprice\_dkl  
 Instruments: lnheatdeg\_cph lnheatdeg\_cph\_2 dwkday dksumm trend tsin tcos  
 lnccoal lncco2\_p co2\_d  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(3,1452)	Prob > F
lnprice_dkl	0.1054	0.0993	0.0224	13.6036	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
 Ho: variables are exogenous

HAC score chi2(1) = .959091 (p = 0.3274)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1453) = .841457 (p = 0.3591)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(2) = 4.34275 (p = 0.1140)  
 (Prewhitening performed with 1 lag)

Regression with Newey-West standard errors  
 maximum lag: 7

Number of obs = 1463  
 F( 7, 1455) = 747.98  
 Prob > F = 0.0000

lncons_dkl	Newey-West		t	P> t	[95% Conf. Interval]	
	Coef.	Std. Err.				
lnheatdeg_h	-.0799847	.0104092	-7.68	0.000	-.1004033	-.0595661
lnheatde_h_2	.0290211	.0034129	8.50	0.000	.0223265	.0357158
dwkday	.1601359	.0025683	62.35	0.000	.1550979	.1651739
dksumm	-.0387122	.0118442	-3.27	0.001	-.0619457	-.0154786
trend	.0000225	6.20e-06	3.62	0.000	.0000103	.0000346
tsin	.0186947	.003614	5.17	0.000	.0116054	.025784
tcos	.0425107	.0062766	6.77	0.000	.0301985	.054823
_cons	7.38638	.0140732	524.85	0.000	7.358774	7.413986

\*\*\*\*\*  
 \* Demand DK1 hour: 6  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression

Number of obs = 1463  
 Wald chi2(8) = 6554.80  
 Prob > chi2 = 0.0000  
 R-squared = 0.7939  
 Root MSE = .06043

lncons_dkl	HAC		z	P> z	[95% Conf. Interval]	
	Coef.	Std. Err.				
lnprice_dkl	-.0016815	.0185816	-0.09	0.928	-.0381007	.0347376
lnheatdeg_h	-.0844809	.0153156	-5.52	0.000	-.1144989	-.0544628
lnheatde_h_2	.0308963	.0055382	5.58	0.000	.0200417	.0417509
dwkday	.2113507	.0102033	20.71	0.000	.1913526	.2313487
dksumm	-.0611822	.0144884	-4.22	0.000	-.0895788	-.0327855
trend	.0000268	7.36e-06	3.65	0.000	.0000124	.0000413
tsin	.0112463	.004092	2.75	0.006	.0032262	.0192665
tcos	.0518678	.0087339	5.94	0.000	.0347495	.068986
_cons	7.407041	.0593325	124.84	0.000	7.290751	7.52333

Instrumented: lnprice\_dkl  
 Instruments: lnheatdeg\_cph lnheatdeg\_cph\_2 dwkday dksumm trend tsin tcos  
 lnppcoal lnco2\_p co2\_d  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(3,1452)	Prob > F
lnprice_dkl	0.1166	0.1105	0.0287	15.8399	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
 Ho: variables are exogenous

HAC score chi2(1) = .523707 (p = 0.4693)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1453) = .448612 (p = 0.5031)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(2) = 4.92836 (p = 0.0851)  
 (Prewhitening performed with 1 lag)

Regression with Newey-West standard errors  
 maximum lag: 7

Number of obs = 1463  
 F( 7, 1455) = 942.10  
 Prob > F = 0.0000

lncons_dkl	Newey-West		t	P> t	[95% Conf. Interval]	
	Coef.	Std. Err.				
lnheatdeg_h	-.0836627	.0117102	-7.14	0.000	-.1066333	-.0606921
lnheatde_h_2	.0305217	.0037278	8.19	0.000	.0232093	.0378341
dwkday	.2104645	.0029141	72.22	0.000	.2047482	.2161808
dksumm	-.06086	.0137935	-4.41	0.000	-.0879172	-.0338027
trend	.0000269	7.09e-06	3.80	0.000	.000013	.0000409
tsin	.011498	.003795	3.03	0.002	.0040538	.0189422
tcos	.0525055	.0068506	7.66	0.000	.0390673	.0659436
_cons	7.402205	.0155565	475.83	0.000	7.371689	7.43272

\*\*\*\*\*  
 \* Demand DK1 hour: 7  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression

Number of obs = 1463  
 Wald chi2(8) = 8875.25  
 Prob > chi2 = 0.0000  
 R-squared = 0.8584  
 Root MSE = .06917

lncons_dkl	HAC		z	P> z	[95% Conf. Interval]	
	Coef.	Std. Err.				
lnprice_dkl	.0153941	.02246	0.69	0.493	-.0286267	.0594149
lnheatdeg_h	-.0637737	.0150624	-4.23	0.000	-.0932954	-.0342519
lnheatde_h_2	.0251387	.0057898	4.34	0.000	.0137909	.0364864
dwkday	.3125778	.0165442	18.89	0.000	.2801517	.3450038
dksumm	-.0838207	.016335	-5.13	0.000	-.1158367	-.0518047
trend	.0000257	8.06e-06	3.19	0.001	9.89e-06	.0000415
tsin	.0023071	.0060685	0.38	0.704	-.009587	.0142012
tcos	.0679385	.010335	6.57	0.000	.0476824	.0881947
_cons	7.404987	.0672223	110.16	0.000	7.273234	7.536741

Instrumented: lnprice\_dkl  
 Instruments: lnheatdeg\_cph lnheatdeg\_cph\_2 dwkday dksumm trend tsin tcos  
 lnppcoal lnco2\_p co2\_d  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(3,1452)	Prob > F
lnprice_dkl	0.1766	0.1710	0.0305	21.4801	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
Ho: variables are exogenous

HAC score chi2(1) = .00194 (p = 0.9649)  
(Prewhitening performed with 1 lag)

HAC regression F(1,1453) = .000038 (p = 0.9951)  
(Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(2) = 5.50531 (p = 0.0638)  
(Prewhitening performed with 1 lag)

Regression with Newey-West standard errors  
maximum lag: 7

Number of obs = 1463  
F( 7, 1455) = 1295.61  
Prob > F = 0.0000

lncons_dkl	Coef.	Newey-West Std. Err.	t	P> t	[95% Conf. Interval]
lnheatdeg_h	-.0698901	.0122869	-5.69	0.000	-.0939921 - .0457882
lnheatde_h_2	.0281469	.0042026	6.70	0.000	.019903 .0363907
dwkday	.3235777	.0037861	85.47	0.000	.316151 .3310044
dksumm	-.0880675	.0151248	-5.82	0.000	-.1177362 -.0583987
trend	.000026	8.50e-06	3.06	0.002	9.34e-06 .0000427
tsin	-.0012644	.0044297	-0.29	0.775	-.0099538 .0074249
tcos	.0621149	.0089074	6.97	0.000	.0446422 .0795876
_cons	7.44673	.0176239	422.54	0.000	7.412159 7.481301

\*\*\*\*\*  
\* Demand DK1 hour: 8  
\*\*\*\*\*

(33649 observations deleted)  
time variable: date, 12.04.2004 to 13.04.2008  
delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression

Number of obs = 1463  
Wald chi2(8) = 10600.59  
Prob > chi2 = 0.0000  
R-squared = 0.8754  
Root MSE = .07932

lncons_dkl	Coef.	HAC Std. Err.	z	P> z	[95% Conf. Interval]
lnprice_dkl	.0177832	.0238359	0.75	0.456	-.0289342 .0645007
lnheatdeg_h	-.0473293	.0139385	-3.40	0.001	-.0746483 -.0200103
lnheatde_h_2	.019965	.0055383	3.60	0.000	.0091101 .0308199
dwkday	.4023622	.0180144	22.34	0.000	.3670547 .4376697
dksumm	-.0832407	.0171007	-4.87	0.000	-.1167573 -.049724
trend	.0000156	8.82e-06	1.77	0.077	-1.69e-06 .0000329
tsin	.0029878	.0065953	0.45	0.651	-.0099388 .0159144
tcos	.0776528	.0109799	7.07	0.000	.0561326 .099173
_cons	7.49242	.071519	104.76	0.000	7.352245 7.632594

Instrumented: lnprice\_dkl  
Instruments: lnheatdeg\_cph lnheatdeg\_cph\_2 dwkday dksumm trend tsin tcos  
lnpcoa lnco2\_p co2\_d  
HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(3,1452)	Prob > F
lnprice_dkl	0.2414	0.2361	0.0502	23.1322	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
Ho: variables are exogenous

HAC score chi2(1) = .224651 (p = 0.6355)  
(Prewhitening performed with 1 lag)

HAC regression F(1,1453) = .143949 (p = 0.7044)  
(Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(2) = 4.85276 (p = 0.0884)  
(Prewhitening performed with 1 lag)

Regression with Newey-West standard errors  
maximum lag: 7

Number of obs = 1463  
F( 7, 1455) = 1433.88  
Prob > F = 0.0000

lncons_dkl	Coef.	Newey-West Std. Err.	t	P> t	[95% Conf. Interval]
lnheatdeg_h	-.0523176	.0120098	-4.36	0.000	-.0758759 -.0287593
lnheatde_h_2	.0227629	.0042398	5.37	0.000	.0144461 .0310798
dwkday	.4151118	.0045671	90.89	0.000	.406153 .4240707
dksumm	-.0879342	.0160952	-5.46	0.000	-.1195065 -.056362
trend	.000019	9.44e-06	2.01	0.044	4.75e-07 .0000375
tsin	-.0013525	.0045015	-0.30	0.764	-.0101825 .0074776
tcos	.0716587	.0107802	6.65	0.000	.0505124 .092805
_cons	7.539223	.0197224	382.27	0.000	7.500535 7.57791

\*\*\*\*\*  
\* Demand DK1 hour: 9  
\*\*\*\*\*

(33649 observations deleted)  
 time variable: **date, 12.04.2004 to 13.04.2008**  
 delta: **1 day**

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(8) = 10401.11  
 Prob > chi2 = 0.0000  
 R-squared = 0.8734  
 Root MSE = .07342

lncons_dk1	Coef.	HAC Std. Err.	z	P> z	[95% Conf. Interval]
lnprice_dk1	.0199872	.0221868	0.90	0.368	-.0234981 .0634724
lnheatdeg_h	-.0406225	.0120304	-3.38	0.001	-.0642016 -.0170434
lnheatde-h_2	.0169812	.0045317	3.75	0.000	.0080992 .0258633
dwkday	.3724997	.0125056	29.79	0.000	.3479891 .3970103
dksum	-.0671943	.0153618	-4.37	0.000	-.0973029 -.0370856
trend	7.60e-06	8.24e-06	0.92	0.357	-8.56e-06 .0000237
tsin	.0095539	.0050218	1.90	0.057	-.0002887 .0193966
tcos	.0736987	.0095979	7.68	0.000	.054887 .0925103
_cons	7.581387	.0709282	106.89	0.000	7.442371 7.720404

Instrumented: lnprice\_dk1  
 Instruments: lnheatdeg\_cph lnheatdeg\_cph\_2 dwkday dksum trend tsin tcos  
 lnpcal lnco2\_p co2\_d  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(3,1452)	Prob > F
lnprice_dk1	0.2465	0.2413	0.0758	47.446	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
 Ho: variables are exogenous

HAC score chi2(1) = .515549 (p = 0.4727)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1453) = .316556 (p = 0.5738)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(2) = 3.61918 (p = 0.1637)  
 (Prewhitening performed with 1 lag)

Regression with Newey-West standard errors  
 maximum lag: 7  
 Number of obs = 1463  
 F( 7, 1455) = 1421.17  
 Prob > F = 0.0000

lncons_dk1	Coef.	Newey-West Std. Err.	t	P> t	[95% Conf. Interval]
lnheatdeg_h	-.0450137	.0109937	-4.09	0.000	-.0665789 -.0234486
lnheatde-h_2	.0194018	.0038127	5.09	0.000	.0119229 .0268808
dwkday	.383088	.0041765	91.72	0.000	.3748954 .3912807
dksum	-.0713006	.014968	-4.76	0.000	-.1006618 -.0419394
trend	.0000119	8.41e-06	1.41	0.158	-4.60e-06 .0000284
tsin	.0062723	.004067	1.54	0.123	-.0017056 .0142502
tcos	.0685224	.0098144	6.98	0.000	.0492705 .0877742
_cons	7.638721	.0176226	433.46	0.000	7.604153 7.67329

\*\*\*\*\*  
 \* Demand DK1 hour: 10  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: **date, 12.04.2004 to 13.04.2008**  
 delta: **1 day**

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(8) = 10150.60  
 Prob > chi2 = 0.0000  
 R-squared = 0.8692  
 Root MSE = .06452

lncons_dk1	Coef.	HAC Std. Err.	z	P> z	[95% Conf. Interval]
lnprice_dk1	.0184868	.0182921	1.01	0.312	-.0173651 .0543386
lnheatdeg_h	-.0387104	.0103434	-3.74	0.000	-.0589831 -.0184378
lnheatde-h_2	.0181341	.0039567	4.58	0.000	.010379 .0258891
dwkday	.3229111	.0082037	39.36	0.000	.3068321 .3389901
dksum	-.0506659	.0132301	-3.83	0.000	-.0765964 -.0247355
trend	9.57e-06	7.39e-06	1.30	0.195	-4.91e-06 .0000241
tsin	.0087563	.0048254	1.81	0.070	-.0007012 .0182139
tcos	.0589815	.0086302	6.83	0.000	.0420666 .0758964
_cons	7.623749	.0592016	128.78	0.000	7.507716 7.739782

Instrumented: lnprice\_dk1  
 Instruments: lnheatdeg\_cph lnheatdeg\_cph\_2 dwkday dksum trend tsin tcos  
 lnpcal lnco2\_p co2\_d  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(3,1452)	Prob > F
lnprice_dk1	0.2692	0.2641	0.1113	66.7666	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
 Ho: variables are exogenous

HAC score chi2(1) = .784022 (p = 0.3759)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1453) = .482756 (p = 0.4873)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(2) = 5.19124 (p = 0.0746) (Prewhitening performed with 1 lag)

Regression with Newey-West standard errors maximum lag: 7 Number of obs = 1463 F( 7, 1455) = 1418.39 Prob > F = 0.0000

Table with 7 columns: lncons\_dkl, Coef., Newey-West Std. Err., t, P>|t|, [95% Conf. Interval]. Rows include lnheatdeg\_h, lnheatde\_h\_2, dwkday, dksum, trend, tsin, tcos, \_cons.

\*\*\*\*\* Demand DK1 hour: 11 \*\*\*\*\*

(33649 observations deleted) time variable: date, 12.04.2004 to 13.04.2008 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression Number of obs = 1463 Wald chi2(8) = 9968.16 Prob > chi2 = 0.0000 R-squared = 0.8687 Root MSE = .0631

Table with 7 columns: lncons\_dkl, Coef., HAC Std. Err., z, P>|z|, [95% Conf. Interval]. Rows include lnprice\_dkl, lnheatdeg\_h, lnheatde\_h\_2, dwkday, dksum, trend, tsin, tcos, \_cons.

Instrumented: lnprice\_dkl Instruments: lnheatdeg\_cph lnheatdeg\_cph\_2 dwkday dksum trend tsin tcos lnppcoal lnco2\_p co2\_d HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Table with 6 columns: Variable, R-sq., Adjusted R-sq., Partial R-sq., HAC F(3,1452), Prob > F. Rows include lnprice\_dkl.

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity Ho: variables are exogenous

HAC score chi2(1) = .59704 (p = 0.4397) (Prewhitening performed with 1 lag)

HAC regression F(1,1453) = .354829 (p = 0.5515) (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(2) = 6.66919 (p = 0.0356) (Prewhitening performed with 1 lag)

Regression with Newey-West standard errors maximum lag: 7 Number of obs = 1463 F( 7, 1455) = 1373.00 Prob > F = 0.0000

Table with 7 columns: lncons\_dkl, Coef., Newey-West Std. Err., t, P>|t|, [95% Conf. Interval]. Rows include lnheatdeg\_h, lnheatde\_h\_2, dwkday, dksum, trend, tsin, tcos, \_cons.

\*\*\*\*\* Demand DK1 hour: 12 \*\*\*\*\*

(33649 observations deleted) time variable: date, 12.04.2004 to 13.04.2008 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression Number of obs = 1463 Wald chi2(8) = 9592.93 Prob > chi2 = 0.0000 R-squared = 0.8700 Root MSE = .06117

Table with 7 columns: lncons\_dkl, Coef., HAC Std. Err., z, P>|z|, [95% Conf. Interval]. Rows include lnprice\_dkl, lnheatdeg\_h, lnheatde\_h\_2, dwkday, dksum, trend, tsin, tcos, \_cons.

Instrumented: lnprice\_dkl Instruments: lnheatdeg\_cph lnheatdeg\_cph\_2 dwkday dksum trend tsin tcos lnppcoal lnco2\_p co2\_d HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(3,1452)	Prob > F
lnprice_dkl	0.3113	0.3066	0.1503	51.9432	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
Ho: variables are exogenous

HAC score chi2(1) = .306224 (p = 0.5800)  
(Prewhitening performed with 1 lag)

HAC regression F(1,1453) = .173988 (p = 0.6767)  
(Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(2) = 7.81852 (p = 0.0201)  
(Prewhitening performed with 1 lag)

Regression with Newey-West standard errors  
maximum lag: 7  
Number of obs = 1463  
F( 7, 1455) = 1324.92  
Prob > F = 0.0000

lncons_dkl	Coef.	Newey-West Std. Err.	t	P> t	[95% Conf. Interval]
lnheatdeg_h	-.0364882	.0085109	-4.29	0.000	-.0531831 -.0197932
lnheatde_h_2	.0198496	.002937	6.76	0.000	.0140884 .0256108
dwkday	.3185753	.0036043	88.39	0.000	.3115051 .3256456
dksumm	-.0437822	.0126957	-3.45	0.001	-.0686859 -.0188784
trend	.0000158	6.79e-06	2.33	0.020	2.53e-06 .0000292
tsin	.002989	.0036725	0.81	0.416	-.004215 .010193
tcos	.041863	.0078352	5.34	0.000	.0264936 .0572325
_cons	7.686971	.0131951	582.56	0.000	7.661088 7.712855

\*\*\*\*\*  
\* Demand DK1 hour: 13  
\*\*\*\*\*

(33649 observations deleted)  
time variable: date, 12.04.2004 to 13.04.2008  
delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
Number of obs = 1463  
Wald chi2(8) = 8751.93  
Prob > chi2 = 0.0000  
R-squared = 0.8667  
Root MSE = .06015

lncons_dkl	Coef.	HAC Std. Err.	z	P> z	[95% Conf. Interval]
lnprice_dkl	.0143578	.0162783	0.88	0.378	-.0175471 .0462627
lnheatdeg_h	-.0304276	.0087517	-3.48	0.001	-.0475807 -.0132745
lnheatde_h_2	.0179131	.0032529	5.51	0.000	.0115374 .0242887
dwkday	.3051222	.0062348	48.94	0.000	.2929022 .3173422
dksumm	-.0367666	.0122269	-3.01	0.003	-.0607309 -.0128023
trend	.0000166	7.03e-06	2.36	0.018	2.81e-06 .0000304
tsin	.0027717	.0043371	0.64	0.523	-.0057289 .0112722
tcos	.04122	.0078049	5.28	0.000	.0259226 .0565173
_cons	7.609496	.0528632	143.95	0.000	7.505886 7.713106

Instrumented: lnprice\_dkl  
Instruments: lnheatdeg\_cph lnheatdeg\_cph\_2 dwkday dksumm trend tsin tcos  
lnpcoal lnco2\_p co2\_d  
HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(3,1452)	Prob > F
lnprice_dkl	0.2623	0.2572	0.1311	50.954	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
Ho: variables are exogenous

HAC score chi2(1) = .061486 (p = 0.8042)  
(Prewhitening performed with 1 lag)

HAC regression F(1,1453) = .030789 (p = 0.8607)  
(Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(2) = 9.13968 (p = 0.0104)  
(Prewhitening performed with 1 lag)

Regression with Newey-West standard errors  
maximum lag: 7  
Number of obs = 1463  
F( 7, 1455) = 1230.65  
Prob > F = 0.0000

lncons_dkl	Coef.	Newey-West Std. Err.	t	P> t	[95% Conf. Interval]
lnheatdeg_h	-.0328446	.0083324	-3.94	0.000	-.0491895 -.0164998
lnheatde_h_2	.0192153	.0028662	6.70	0.000	.0135929 .0248376
dwkday	.3094081	.0035907	86.17	0.000	.3023646 .3164515
dksumm	-.0392883	.012237	-3.21	0.001	-.0632924 -.0152842
trend	.00002	6.60e-06	3.03	0.003	7.04e-06 .0000329
tsin	.0003119	.0034582	0.09	0.928	-.0064718 .0070955
tcos	.0376805	.0073705	5.11	0.000	.0232227 .0521384
_cons	7.653516	.0127832	598.72	0.000	7.628441 7.678592

\*\*\*\*\*  
\* Demand DK1 hour: 14  
\*\*\*\*\*



(33649 observations deleted)  
 time variable: **date, 12.04.2004 to 13.04.2008**  
 delta: **1 day**

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(8) = 8464.12  
 Prob > chi2 = 0.0000  
 R-squared = 0.8568  
 Root MSE = .06655

lncons_dkl	Coef.	HAC Std. Err.	z	P> z	[95% Conf. Interval]
lnprice_dkl	.0118019	.0171681	0.69	0.492	-.021847 .0454508
lnheatdeg_h	-.0309155	.0090454	-3.42	0.001	-.0486441 -.0131869
lnheatde-h_2	.0177151	.0033237	5.33	0.000	.0112007 .0242294
dwkday	.3273931	.0073406	44.60	0.000	.3130059 .3417804
dksumm	-.0397092	.0129397	-3.07	0.002	-.0650706 -.0143478
trend	.0000184	7.28e-06	2.53	0.011	4.15e-06 .0000327
tsin	.0005115	.0042828	0.12	0.905	-.0078827 .0089057
tcos	.0410008	.008026	5.11	0.000	.02527 .0567315
_cons	7.598145	.0556473	136.54	0.000	7.489078 7.707212

Instrumented: lnprice\_dkl  
 Instruments: lnheatdeg\_cph lnheatdeg\_cph\_2 dwkday dksumm trend tsin tcos  
 lnppcoal lnco2\_p co2\_d  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(3,1452)	Prob > F
lnprice_dkl	0.2739	0.2689	0.1315	50.8263	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
 Ho: variables are exogenous

HAC score chi2(1) = .414651 (p = 0.5196)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1453) = .25477 (p = 0.6138)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(2) = 8.03594 (p = 0.0180)  
 (Prewhitening performed with 1 lag)

Regression with Newey-West standard errors  
 maximum lag: 7  
 Number of obs = 1463  
 F( 7, 1455) = 1188.03  
 Prob > F = 0.0000

lncons_dkl	Coef.	Newey-West Std. Err.	t	P> t	[95% Conf. Interval]
lnheatdeg_h	-.0325925	.0086425	-3.77	0.000	-.0495456 -.0156393
lnheatde-h_2	.0186487	.0029591	6.30	0.000	.0128441 .0244532
dwkday	.331469	.0038972	85.05	0.000	.3238243 .3391138
dksumm	-.0417091	.0129146	-3.23	0.001	-.0670424 -.0163759
trend	.0000209	7.02e-06	2.98	0.003	7.13e-06 .0000347
tsin	-.0014084	.0034852	-0.40	0.686	-.0082449 .0054282
tcos	.0382801	.0076546	5.00	0.000	.0232648 .0532954
_cons	7.634043	.0132131	577.76	0.000	7.608124 7.659961

\*\*\*\*\*  
 \* Demand DK1 hour: 15  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: **date, 12.04.2004 to 13.04.2008**  
 delta: **1 day**

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(8) = 7601.67  
 Prob > chi2 = 0.0000  
 R-squared = 0.8359  
 Root MSE = .0701

lncons_dkl	Coef.	HAC Std. Err.	z	P> z	[95% Conf. Interval]
lnprice_dkl	.0088008	.0176476	0.50	0.618	-.0257878 .0433894
lnheatdeg_h	-.0320633	.0091785	-3.49	0.000	-.0500528 -.0140739
lnheatde-h_2	.0185877	.0034257	5.43	0.000	.0118734 .025302
dwkday	.3144955	.0079056	39.78	0.000	.2990008 .3299902
dksumm	-.0374038	.0125174	-2.99	0.003	-.0619375 -.0128701
trend	.0000211	7.10e-06	2.97	0.003	7.16e-06 .000035
tsin	-.0022026	.0044594	-0.49	0.621	-.0109429 .0065377
tcos	.0447931	.008432	5.31	0.000	.0282666 .0613195
_cons	7.591337	.0559583	135.66	0.000	7.481661 7.701014

Instrumented: lnprice\_dkl  
 Instruments: lnheatdeg\_cph lnheatdeg\_cph\_2 dwkday dksumm trend tsin tcos  
 lnppcoal lnco2\_p co2\_d  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(3,1452)	Prob > F
lnprice_dkl	0.2348	0.2296	0.0999	46.5837	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
 Ho: variables are exogenous

HAC score chi2(1) = .730575 (p = 0.3927)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1453) = .464201 (p = 0.4958)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(2) = 7.66117 (p = 0.0217)  
 (Prewhitening performed with 1 lag)

Regression with Newey-West standard errors  
 maximum lag: 7

Number of obs = 1463  
 F( 7, 1455) = 1076.77  
 Prob > F = 0.0000

lncons_dkl	Coef.	Newey-West Std. Err.	t	P> t	[95% Conf. Interval]
lnheatdeg_h	-.0332291	.0088427	-3.76	0.000	-.0505748 -.0158834
lnheatde_h_2	.0192798	.003058	6.30	0.000	.0132812 .0252784
dwkday	.3178421	.0039581	80.30	0.000	.310078 .3256062
dksum	-.0386394	.0125355	-3.08	0.002	-.0632289 -.0140499
trend	.0000227	6.86e-06	3.31	0.001	9.26e-06 .0000362
tsin	-.003656	.0036179	-1.01	0.312	-.0107529 .0034408
tcos	.0428014	.0078892	5.43	0.000	.0273259 .0582769
_cons	7.617727	.0131924	577.43	0.000	7.591849 7.643605

\*\*\*\*\*  
 \* Demand DK1 hour: 16  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression

Number of obs = 1463  
 Wald chi2(8) = 6732.40  
 Prob > chi2 = 0.0000  
 R-squared = 0.8242  
 Root MSE = .06688

lncons_dkl	Coef.	HAC Std. Err.	z	P> z	[95% Conf. Interval]
lnprice_dkl	.003036	.0169257	0.18	0.858	-.0301378 .0362099
lnheatdeg_h	-.0360794	.0093184	-3.87	0.000	-.0543431 -.0178156
lnheatde_h_2	.0207479	.0033674	6.16	0.000	.0141479 .0273479
dwkday	.2744835	.0075237	36.48	0.000	.2597373 .2892297
dksum	-.0313315	.0119168	-2.63	0.009	-.054688 -.007975
trend	.0000249	6.89e-06	3.62	0.000	.0000114 .0000384
tsin	-.0063464	.004603	-1.38	0.168	-.0153682 .0026754
tcos	.0572924	.0087311	6.56	0.000	.0401798 .0744051
_cons	7.598823	.052986	143.41	0.000	7.494973 7.702674

Instrumented: lnprice\_dkl  
 Instruments: lnheatdeg\_cph lnheatdeg\_cph\_2 dwkday dksum trend tsin tcos  
 lnppcoal lnco2\_p co2\_d  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(3,1452)	Prob > F
lnprice_dkl	0.2207	0.2153	0.0925	41.4899	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity

H0: variables are exogenous

HAC score chi2(1) = 1.12941 (p = 0.2879)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1453) = .745631 (p = 0.3880)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(2) = 6.97848 (p = 0.0305)  
 (Prewhitening performed with 1 lag)

Regression with Newey-West standard errors  
 maximum lag: 7

Number of obs = 1463  
 F( 7, 1455) = 952.84  
 Prob > F = 0.0000

lncons_dkl	Coef.	Newey-West Std. Err.	t	P> t	[95% Conf. Interval]
lnheatdeg_h	-.0364807	.0090398	-4.04	0.000	-.0542131 -.0187483
lnheatde_h_2	.0209866	.00308	6.81	0.000	.0149449 .0270283
dwkday	.2756497	.0037595	73.32	0.000	.2682751 .2830243
dksum	-.0316975	.0118806	-2.67	0.008	-.0550025 -.0083925
trend	.0000254	6.55e-06	3.88	0.000	.0000126 .0000383
tsin	-.006874	.0038074	-1.81	0.071	-.0143426 .0005946
tcos	.0566931	.0083776	6.77	0.000	.0402596 .0731265
_cons	7.607889	.0130544	582.78	0.000	7.582281 7.633496

\*\*\*\*\*  
 \* Demand DK1 hour: 17  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: date, 12.04.2004 to 13.04.2008  
 delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression

Number of obs = 1463  
 Wald chi2(8) = 6226.10  
 Prob > chi2 = 0.0000  
 R-squared = 0.8270  
 Root MSE = .06481

lncons_dkl	Coef.	HAC Std. Err.	z	P> z	[95% Conf. Interval]
lnprice_dkl	-.0080186	.0182409	-0.44	0.660	-.0437702 .027733
lnheatdeg_h	-.0383208	.0106518	-3.60	0.000	-.059198 -.0174436
lnheatde_h_2	.0237293	.0040167	5.91	0.000	.0158566 .0316019
dwkday	.2347622	.0072704	32.29	0.000	.2205125 .2490119
dksum	-.0289043	.0118114	-2.45	0.014	-.0520543 -.0057544
trend	.0000256	7.94e-06	3.23	0.001	.0000101 .0000412
tsin	-.0183226	.0062155	-2.95	0.003	-.0305048 -.0061404
tcos	.0842388	.0102748	8.20	0.000	.0641004 .1043771
_cons	7.669693	.0563957	136.00	0.000	7.55916 7.780227

Instrumented: lnprice\_dkl  
 Instruments: lnheatdeg\_cph lnheatdeg\_cph\_2 dwkday dksum trend tsin tcos  
 lnppcoal lnco2\_p co2\_d  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(3,1452)	Prob > F
lnprice_dk1	0.3087	0.3039	0.1380	53.8406	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity

Ho: variables are exogenous

HAC score chi2(1) = 3.97211 (p = 0.0463)  
(Prewhitening performed with 1 lag)

HAC regression F(1,1453) = 2.73131 (p = 0.0986)  
(Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(2) = 10.376 (p = 0.0056)  
(Prewhitening performed with 1 lag)

Regression with Newey-West standard errors  
maximum lag: 7

Number of obs = 1463  
F( 7, 1455) = 899.87  
Prob > F = 0.0000

lncons_dk1	Coef.	Newey-West Std. Err.	t	P> t	[95% Conf. Interval]
lnheatdeg_h	-.0369844	.0100068	-3.70	0.000	-.0566137 -.0173551
lnheatde_h_2	.0229024	.0034948	6.55	0.000	.0160471 .0297577
dwkday	.2319976	.0036586	63.41	0.000	.2248208 .2391743
dksumm	-.027953	.0116945	-2.39	0.017	-.050893 -.0050131
trend	.0000241	7.27e-06	3.31	0.001	9.84e-06 .0000384
tsin	-.0165888	.0050243	-3.30	0.001	-.0264444 -.0067332
tcos	.08578	.0098999	8.66	0.000	.0663604 .1051997
_cons	7.646084	.0150487	508.09	0.000	7.616565 7.675603

\*\*\*\*\*  
\* Demand DK1 hour: 18  
\*\*\*\*\*

(33649 observations deleted)  
time variable: date, 12.04.2004 to 13.04.2008  
delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression

Number of obs = 1463  
Wald chi2(8) = 5911.93  
Prob > chi2 = 0.0000  
R-squared = 0.8382  
Root MSE = .06194

lncons_dk1	HAC				
	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]
lnprice_dk1	-.0106942	.0179053	-0.60	0.550	-.0457879 .0243995
lnheatdeg_h	-.03935	.0110152	-3.57	0.000	-.0609394 -.0177605
lnheatde_h_2	.0245686	.0042005	5.85	0.000	.0163358 .0328015
dwkday	.1987749	.0052546	37.83	0.000	.1884762 .2090737
dksumm	-.0301674	.0110518	-2.73	0.006	-.0518285 -.0085063
trend	.0000237	8.25e-06	2.87	0.004	7.50e-06 .0000398
tsin	-.0176533	.006552	-2.69	0.007	-.0304951 -.0048115
tcos	.104614	.0101201	10.34	0.000	.0847789 .1244449
_cons	7.776502	.0568242	136.85	0.000	7.665128 7.887875

Instrumented: lnprice\_dk1  
Instruments: lnheatdeg\_cph lnheatdeg\_cph\_2 dwkday dksumm trend tsin tcos  
lnpcoal lnco2\_p co2\_d  
HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(3,1452)	Prob > F
lnprice_dk1	0.4370	0.4331	0.2373	68.9137	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity

Ho: variables are exogenous

HAC score chi2(1) = 9.94326 (p = 0.0016)  
(Prewhitening performed with 1 lag)

HAC regression F(1,1453) = 8.28034 (p = 0.0041)  
(Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(2) = 6.68623 (p = 0.0353)  
(Prewhitening performed with 1 lag)

Regression with Newey-West standard errors  
maximum lag: 7

Number of obs = 1463  
F( 7, 1455) = 858.21  
Prob > F = 0.0000

lncons_dk1	Coef.	Newey-West Std. Err.	t	P> t	[95% Conf. Interval]
lnheatdeg_h	-.0373336	.0101235	-3.69	0.000	-.0571919 -.0174753
lnheatde_h_2	.0232799	.0034631	6.72	0.000	.0164867 .0300731
dwkday	.1964126	.0034237	57.37	0.000	.1896966 .2031285
dksumm	-.0289447	.0109025	-2.65	0.008	-.050331 -.0075584
trend	.000021	7.09e-06	2.97	0.003	7.14e-06 .0000349
tsin	-.0152882	.0052861	-2.89	0.004	-.0256573 -.004919
tcos	.1061797	.0099119	10.71	0.000	.0867366 .1256228
_cons	7.74424	.015103	512.76	0.000	7.714614 7.773866

\*\*\*\*\*  
\* Demand DK1 hour: 19  
\*\*\*\*\*

(33649 observations deleted)  
 time variable: **date, 12.04.2004 to 13.04.2008**  
 delta: **1 day**

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(8) = 6460.99  
 Prob > chi2 = 0.0000  
 R-squared = 0.8522  
 Root MSE = .05414

Incons_dk1	Coef.	HAC Std. Err.	z	P> z	[95% Conf. Interval]
lnprice_dk1	-.0017464	.0163115	-0.11	0.915	-.0337164 .0302235
lnheatdeg_h	-.0398895	.0088906	-4.49	0.000	-.0573148 -.0224642
lnheatde-h_2	.0236702	.0035852	6.60	0.000	.0166433 .0306971
dwkday	.1658851	.003958	41.91	0.000	.1581275 .1736427
dksum	-.0265173	.0094049	-2.82	0.005	-.0449506 -.0080841
trend	.0000247	6.97e-06	3.54	0.000	.000011 .0000384
tsin	-.0076941	.0048285	-1.59	0.111	-.0171577 .0017695
tcos	.103543	.0082389	12.57	0.000	.087395 .1196909
_cons	7.754695	.0535258	144.88	0.000	7.649786 7.859604

Instrumented: lnprice\_dk1  
 Instruments: lnheatdeg\_cph lnheatdeg\_cph\_2 dwkday dksum trend tsin tcos  
 lnppcoal lnco2\_p co2\_d  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(3,1452)	Prob > F
lnprice_dk1	0.4446	0.4408	0.2763	81.2379	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
 Ho: variables are exogenous

HAC score chi2(1) = 5.36085 (p = 0.0206)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1453) = 4.70714 (p = 0.0302)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(2) = 7.16695 (p = 0.0278)  
 (Prewhitening performed with 1 lag)

Regression with Newey-West standard errors  
 maximum lag: 7  
 Number of obs = 1463  
 F( 7, 1455) = 903.28  
 Prob > F = 0.0000

Incons_dk1	Coef.	Newey-West Std. Err.	t	P> t	[95% Conf. Interval]
lnheatdeg_h	-.03961	.0081571	-4.86	0.000	-.0556109 -.0236091
lnheatde-h_2	.0234772	.0029493	7.96	0.000	.0176919 .0292625
dwkday	.1656158	.0029753	55.66	0.000	.1597794 .1714522
dksum	-.0263034	.0093113	-2.82	0.005	-.0445684 -.0080384
trend	.0000243	6.16e-06	3.94	0.000	.0000122 .0000363
tsin	-.0073239	.0039278	-1.86	0.062	-.0150285 .0003808
tcos	.1038269	.0082729	12.55	0.000	.0875988 .120055
_cons	7.749358	.013033	594.59	0.000	7.723793 7.774924

\*\*\*\*\*  
 \* Demand DK1 hour: 20  
 \*\*\*\*\*

(33649 observations deleted)  
 time variable: **date, 12.04.2004 to 13.04.2008**  
 delta: **1 day**

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(8) = 6627.51  
 Prob > chi2 = 0.0000  
 R-squared = 0.8227  
 Root MSE = .05967

Incons_dk1	Coef.	HAC Std. Err.	z	P> z	[95% Conf. Interval]
lnprice_dk1	.0076621	.0162892	0.47	0.638	-.0242641 .0395883
lnheatdeg_h	-.0343974	.0081666	-4.21	0.000	-.0504036 -.0183911
lnheatde-h_2	.0220329	.0036095	6.10	0.000	.0149584 .0291075
dwkday	.1690507	.003672	46.04	0.000	.1618536 .1762477
dksum	-.0454133	.0098046	-4.63	0.000	-.0646299 -.0261966
trend	.000033	7.16e-06	4.61	0.000	.000019 .000047
tsin	-.0128028	.0049699	-2.58	0.010	-.0225436 -.003062
tcos	.089606	.0085571	10.47	0.000	.0728345 .1063775
_cons	7.650461	.0537294	142.39	0.000	7.545153 7.755768

Instrumented: lnprice\_dk1  
 Instruments: lnheatdeg\_cph lnheatdeg\_cph\_2 dwkday dksum trend tsin tcos  
 lnppcoal lnco2\_p co2\_d  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(3,1452)	Prob > F
lnprice_dk1	0.4682	0.4645	0.3076	77.3009	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
 Ho: variables are exogenous

HAC score chi2(1) = 5.20629 (p = 0.0225)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1453) = 4.70195 (p = 0.0303)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(2) = 7.08837 (p = 0.0289)  
(Prewhitening performed with 1 lag)

Regression with Newey-West standard errors  
maximum lag: 7

Number of obs = 1463  
F( 7, 1455) = 906.10  
Prob > F = 0.0000

lncons_dkl	Coef.	Newey-West Std. Err.	t	P> t	[95% Conf. Interval]
lnheatdeg_h	-.0353263	.007874	-4.49	0.000	-.0507719 -.0198806
lnheatde_h_2	.0227499	.00336	6.77	0.000	.0161589 .0293409
dwkday	.1700239	.0028399	59.87	0.000	.1644531 .1755947
dksum	-.0467808	.0096253	-4.86	0.000	-.0656617 -.0278999
trend	.0000349	6.56e-06	5.32	0.000	.0000221 .0000478
tsin	-.0146122	.0041239	-3.54	0.000	-.0227016 -.0065228
tcos	.0880965	.0086923	10.14	0.000	.0710458 .1051472
_cons	7.673743	.0136686	561.42	0.000	7.64693 7.700555

\*\*\*\*\*  
\* Demand DK1 hour: 21  
\*\*\*\*\*

(33649 observations deleted)  
time variable: date, 12.04.2004 to 13.04.2008  
delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression

Number of obs = 1463  
Wald chi2(8) = 6457.95  
Prob > chi2 = 0.0000  
R-squared = 0.7813  
Root MSE = .06113

lncons_dkl	Coef.	HAC Std. Err.	z	P> z	[95% Conf. Interval]
lnprice_dkl	.0080227	.0151372	0.53	0.596	-.0216456 .0376911
lnheatdeg_h	-.0390565	.0076278	-5.12	0.000	-.0540068 -.0241063
lnheatde_h_2	.0220759	.0034798	6.34	0.000	.0152556 .0288962
dwkday	.1590081	.0034434	46.18	0.000	.1522591 .1657571
dksum	-.0631235	.0106072	-5.95	0.000	-.0839132 -.0423338
trend	.0000359	6.76e-06	5.31	0.000	.0000226 .0000491
tsin	-.01378	.0049359	-2.79	0.005	-.0234541 -.0041058
tcos	.0711002	.0084137	8.45	0.000	.0546097 .0875908
_cons	7.608174	.0502683	151.35	0.000	7.50965 7.706698

Instrumented: lnprice\_dkl  
Instruments: lnheatdeg\_cph lnheatdeg\_cph\_2 dwkday dksum trend tsin tcos  
lnpcoal lnco2\_p co2\_d  
HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(3,1452)	Prob > F
lnprice_dkl	0.4523	0.4485	0.3247	84.3445	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity

Ho: variables are exogenous

HAC score chi2(1) = 3.94165 (p = 0.0471)  
(Prewhitening performed with 1 lag)

HAC regression F(1,1453) = 3.13965 (p = 0.0766)  
(Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(2) = 8.31748 (p = 0.0156)  
(Prewhitening performed with 1 lag)

Regression with Newey-West standard errors  
maximum lag: 7

Number of obs = 1463  
F( 7, 1455) = 885.79  
Prob > F = 0.0000

lncons_dkl	Coef.	Newey-West Std. Err.	t	P> t	[95% Conf. Interval]
lnheatdeg_h	-.0400055	.007322	-5.46	0.000	-.0543684 -.0256426
lnheatde_h_2	.0227009	.0032402	7.01	0.000	.0163449 .0290569
dwkday	.1600827	.0025291	63.30	0.000	.1551216 .1650438
dksum	-.0645031	.0104243	-6.19	0.000	-.0849513 -.0440549
trend	.0000376	6.35e-06	5.93	0.000	.0000252 .0000501
tsin	-.0154068	.0043091	-3.58	0.000	-.0238595 -.0069541
tcos	.0696124	.0082508	8.44	0.000	.0534277 .0857971
_cons	7.63304	.0130569	584.60	0.000	7.607428 7.658653

\*\*\*\*\*  
\* Demand DK1 hour: 22  
\*\*\*\*\*

(33649 observations deleted)  
time variable: date, 12.04.2004 to 13.04.2008  
delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression

Number of obs = 1463  
Wald chi2(8) = 5504.43  
Prob > chi2 = 0.0000  
R-squared = 0.7308  
Root MSE = .06174

lncons_dkl	Coef.	HAC Std. Err.	z	P> z	[95% Conf. Interval]
lnprice_dkl	-.0027111	.0162256	-0.17	0.867	-.0345127 .0290906
lnheatdeg_h	-.0399208	.0087189	-4.58	0.000	-.0570094 -.0228322
lnheatde_h_2	.0206374	.0035527	5.81	0.000	.0136743 .0276005
dwkday	.1548487	.0036743	42.14	0.000	.1476473 .1620502
dksum	-.0504415	.0133842	-3.77	0.000	-.0766741 -.0242089
trend	.0000363	7.33e-06	4.96	0.000	.000022 .0000507
tsin	-.0036375	.0046205	-0.79	0.431	-.0126936 .0054186
tcos	.0570727	.0080526	7.09	0.000	.04129 .0728555
_cons	7.613866	.0519357	146.60	0.000	7.512073 7.715658

Instrumented: lnprice\_dkl  
Instruments: lnheatdeg\_cph lnheatdeg\_cph\_2 dwkday dksum trend tsin tcos  
lnpcoal lnco2\_p co2\_d  
HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(3,1452)	Prob > F
lnprice_dkl	0.2441	0.2389	0.1716	65.0691	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
Ho: variables are exogenous

HAC score chi2(1) = 2.14553 (p = 0.1430)  
(Prewhitening performed with 1 lag)

HAC regression F(1,1453) = 1.78809 (p = 0.1814)  
(Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(2) = 8.08229 (p = 0.0176)  
(Prewhitening performed with 1 lag)

Regression with Newey-West standard errors  
maximum lag: 7

Number of obs = 1463  
F( 7, 1455) = 777.22  
Prob > F = 0.0000

lncons_dkl	Coef.	Newey-West Std. Err.	t	P> t	[95% Conf. Interval]
lnheatdeg_h	-.0395208	.0083405	-4.74	0.000	-.0558815 -.0231602
lnheatde_h_2	.0204135	.0032523	6.28	0.000	.0140337 .0267933
dwkday	.1544173	.0024116	64.03	0.000	.1496866 .1591479
dksumm	-.0500565	.0131064	-3.82	0.000	-.0757661 -.024347
trend	.0000358	6.59e-06	5.43	0.000	.0000229 .0000488
tsin	-.0032197	.0041529	-0.78	0.438	-.0113659 .0049266
tcos	.0576163	.0073307	7.86	0.000	.0432364 .0719963
_cons	7.605416	.0130305	583.66	0.000	7.579855 7.630976

\*\*\*\*\*  
\* Demand DK1 hour: 23  
\*\*\*\*\*

(33649 observations deleted)  
time variable: date, 12.04.2004 to 13.04.2008  
delta: 1 day

Number of gaps in sample: 0

Instrumental variables (2SLS) regression

Number of obs = 1463  
Wald chi2(8) = 4873.86  
Prob > chi2 = 0.0000  
R-squared = 0.6920  
Root MSE = .05464

lncons_dkl	Coef.	HAC Std. Err.	z	P> z	[95% Conf. Interval]
lnprice_dkl	-.0167442	.0128571	-1.30	0.193	-.0419436 .0084553
lnheatdeg_h	-.0571305	.0085632	-6.67	0.000	-.0739141 -.040347
lnheatde_h_2	.0235233	.0030962	7.60	0.000	.0174548 .0295918
dwkday	.1419582	.0028011	50.68	0.000	.1364682 .1474481
dksumm	-.0338049	.0106875	-3.16	0.002	-.0547521 -.0128578
trend	.0000293	5.45e-06	5.37	0.000	.0000186 .00004
tsin	.0087146	.0032158	2.71	0.007	.0024117 .0150175
tcos	.0376494	.0061227	6.15	0.000	.0256492 .0496497
_cons	7.640169	.0437814	174.51	0.000	7.554359 7.725979

Instrumented: lnprice\_dkl  
Instruments: lnheatdeg\_cph lnheatdeg\_cph\_2 dwkday dksumm trend tsin tcos  
lnpcoa lnco2\_p co2\_d  
HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(3,1452)	Prob > F
lnprice_dkl	0.2193	0.2139	0.1680	72.0572	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
Ho: variables are exogenous

HAC score chi2(1) = 4.54377 (p = 0.0330)  
(Prewhitening performed with 1 lag)

HAC regression F(1,1453) = 4.42421 (p = 0.0356)  
(Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(2) = 3.61269 (p = 0.1643)  
(Prewhitening performed with 1 lag)

Regression with Newey-West standard errors  
maximum lag: 7

Number of obs = 1463  
F( 7, 1455) = 724.80  
Prob > F = 0.0000

lncons_dkl	Coef.	Newey-West Std. Err.	t	P> t	[95% Conf. Interval]
lnheatdeg_h	-.0539369	.0081101	-6.65	0.000	-.0698455 -.0380282
lnheatde_h_2	.0220273	.0028615	7.70	0.000	.0164143 .0276404
dwkday	.1400657	.0022487	62.29	0.000	.1356547 .1444767
dksumm	-.0321259	.010499	-3.06	0.002	-.0527207 -.011531
trend	.0000266	5.19e-06	5.13	0.000	.0000165 .0000368
tsin	.0105376	.0031544	3.34	0.001	.0043499 .0167254
tcos	.0405722	.0057741	7.03	0.000	.0292458 .0518987
_cons	7.586756	.0108971	696.22	0.000	7.56538 7.608132

\*\*\*\*\*  
\* Demand DK1 hour: 24  
\*\*\*\*\*

(33649 observations deleted)  
 time variable: **date, 12.04.2004 to 13.04.2008**  
 delta: **1 day**

Number of gaps in sample: 0

Instrumental variables (2SLS) regression  
 Number of obs = 1463  
 Wald chi2(8) = 3455.04  
 Prob > chi2 = 0.0000  
 R-squared = 0.6396  
 Root MSE = .05162

lncons_dkl	Coef.	HAC Std. Err.	z	P> z	[95% Conf. Interval]
lnprice_dkl	-.0184771	.0152532	-1.21	0.226	-.0483728 .0114186
lnheatdeg_h	-.0732833	.0094713	-7.74	0.000	-.0918467 -.0547199
lnheatde-h_2	.0274713	.0031405	8.75	0.000	.0213159 .0336266
dwkday	.1201776	.0033073	36.34	0.000	.1136954 .1266599
dksumm	-.0334624	.0103157	-3.24	0.001	-.0536807 -.0132441
trend	.0000197	5.40e-06	3.65	0.000	9.14e-06 .0000303
tsin	.015583	.0032535	4.79	0.000	.0092063 .0219597
tcos	.0279531	.005743	4.87	0.000	.016697 .0392093
_cons	7.601453	.0529412	143.58	0.000	7.49769 7.705216

Instrumented: lnprice\_dkl  
 Instruments: lnheatdeg\_cph lnheatdeg\_cph\_2 dwkday dksumm trend tsin tcos  
 lnpccoal lnco2\_p co2\_d  
 HAC VCE: Bartlett kernel with 7 lags

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	HAC F(3,1452)	Prob > F
lnprice_dkl	0.1002	0.0940	0.0683	48.5992	0.0000

HAC VCE: Bartlett kernel with 7 lags

Tests of endogeneity  
 Ho: variables are exogenous

HAC score chi2(1) = 3.27708 (p = 0.0703)  
 (Prewhitening performed with 1 lag)

HAC regression F(1,1453) = 3.06673 (p = 0.0801)  
 (Based on Bartlett kernel with 7 lags)

Test of overidentifying restrictions:

Score chi2(2) = 1.84723 (p = 0.3971)  
 (Prewhitening performed with 1 lag)

Regression with Newey-West standard errors  
 maximum lag: 7  
 Number of obs = 1463  
 F( 7, 1455) = 598.02  
 Prob > F = 0.0000

lncons_dkl	Coef.	Newey-West Std. Err.	t	P> t	[95% Conf. Interval]
lnheatdeg_h	-.0683082	.0089415	-7.64	0.000	-.0858477 -.0507686
lnheatde-h_2	.0253906	.0028544	8.90	0.000	.0197915 .0309897
dwkday	.1175674	.0021387	54.97	0.000	.1133722 .1217626
dksumm	-.0317867	.0101591	-3.13	0.002	-.0517148 -.0118585
trend	.0000193	5.20e-06	3.70	0.000	9.06e-06 .0000295
tsin	.0166957	.0032284	5.17	0.000	.0103629 .0230286
tcos	.0311473	.0053454	5.83	0.000	.0206618 .0416327
_cons	7.54055	.0126846	594.47	0.000	7.515668 7.565432

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