

Summary

December 6, 2024

Contents

- 0.1 Loaded Graphs 2
 - 0.1.1 $g_{\{0\}}$ 2
 - 0.1.2 $g_{\{1\}}$ 2
 - 0.1.3 $g_{\{2\}}$ 2
- 0.2 Product Graphs 2
 - 0.2.1 $p_{\{0,56\}}$ 2
- 0.3 Enumerated Flows 3
 - 0.3.1 Solution 0 3
 - 0.3.2 Solution 1 5
 - 0.3.3 Solution 2 7
 - 0.3.4 Solution 3 9
 - 0.3.5 Solution 4 11
 - 0.3.6 Solution 5 13
 - 0.3.7 Solution 6 15
 - 0.3.8 Solution 7 16
 - 0.3.9 Solution 8 18
 - 0.3.10 Solution 9 20
 - 0.3.11 Solution 10 22
 - 0.3.12 Solution 11 24
 - 0.3.13 Solution 12 26

0.1 Loaded Graphs

0.1.1 g_{0}



File: out/001_g_0_10300000



File: out/003_g_0_11310100

0.1.2 g_{1}



File: out/005_g_1_10300000



File: out/007_g_1_11310100

0.1.3 g_{2}



File: out/009_g_2_10300000



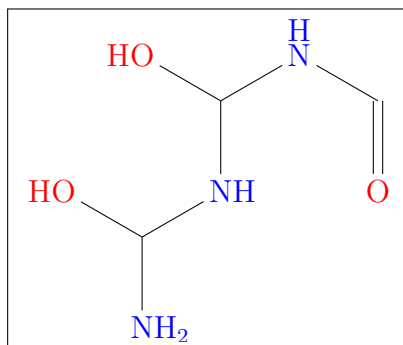
File: out/011_g_2_11310100

0.2 Product Graphs

0.2.1 p_{0,56}



File: out/013_g_1088_10300000



File: out/015_g_1088_11310100

0.3 Enumerated Flows

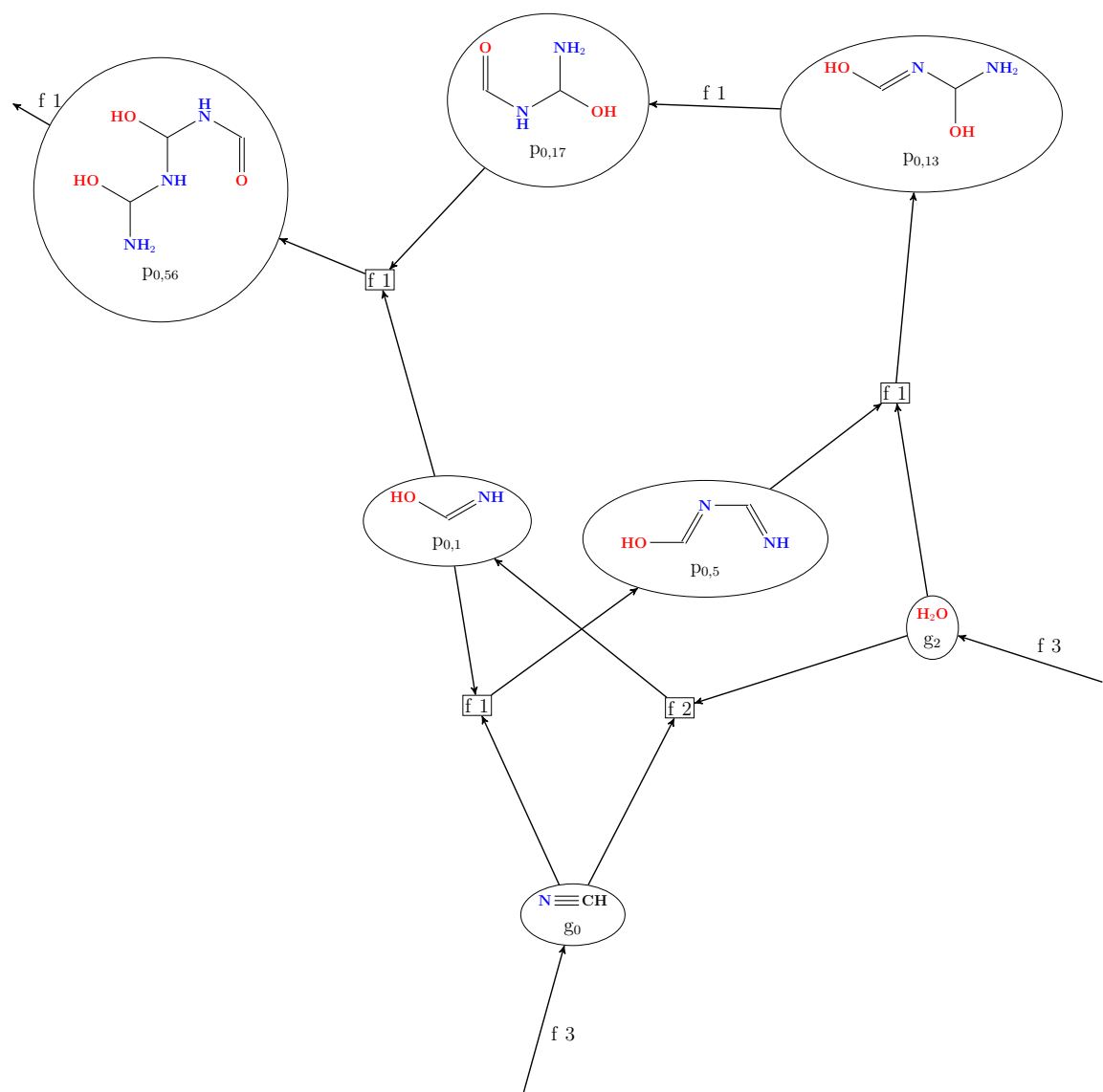
0.3.1 Solution 0

Overall Data

Objective value (non-integral): -0.114802

Vertex/Graph	In	Out	G	logK	t_order
g_{0}	3	0	-5.507152	1.000000	0
g_{2}	3	0	-5.068043	1.000000	0
p_{0,13}	0	0	-21.240678	1.000000	64
p_{0,17}	0	0	-21.248887	0.000000	65
p_{0,1}	0	0	-10.610101	1.000000	1
p_{0,56}	0	1	-31.869324	0.000000	67
p_{0,5}	0	0	-16.158998	1.000000	2

Filtered Graph



File: out/029_dg_0_11100_f_0_0_filt

Vertex	InFlow	OutFlow	$x_v^{\Delta G^0}$	x_v^K	$x_v^{\Delta G}$	t_v
g_0	3	0	-14459.025578	1.0	-14455.699793	0
g_2	3	0	-13306.144961	1.0	-13302.819176	0
$p_{0,1}$	0	0	-27856.817054	1.0	-27853.491269	1
$p_{0,5}$	0	0	-42425.44262	1.0	-42422.116835	2
$p_{0,13}$	0	0	-55767.391129	1.0	-55764.065344	64
$p_{0,17}$	0	0	-55788.944315	0.0	-55788.944315	65
$p_{0,56}$	0	1	-83672.898792	0.0	-83672.898792	67

Hyperedge	Source	Target	Flow	$x_e^{\Delta G}$	$\bar{x}_e^{\Delta G}$
6	$g_0, g_2,$	$p_{0,1},$	2	-94.74781	-94.74781
14	$g_0, p_{0,1},$	$p_{0,5},$	1	-112.701283	-112.701283
123	$g_2, p_{0,5},$	$p_{0,13},$	1	-38.904842	-38.904842
196	$p_{0,1}, p_{0,17},$	$p_{0,56},$	1	-30.238717	-30.238717
250	$p_{0,13},$	$p_{0,17},$	1	-24.65448	-24.65448
Sum					-301.4139068038242

$$\Delta G = -39.599493187602874$$

$$\Delta E = -0.1148024940744313$$

$$|E| = 6$$

$$|U| = 5$$

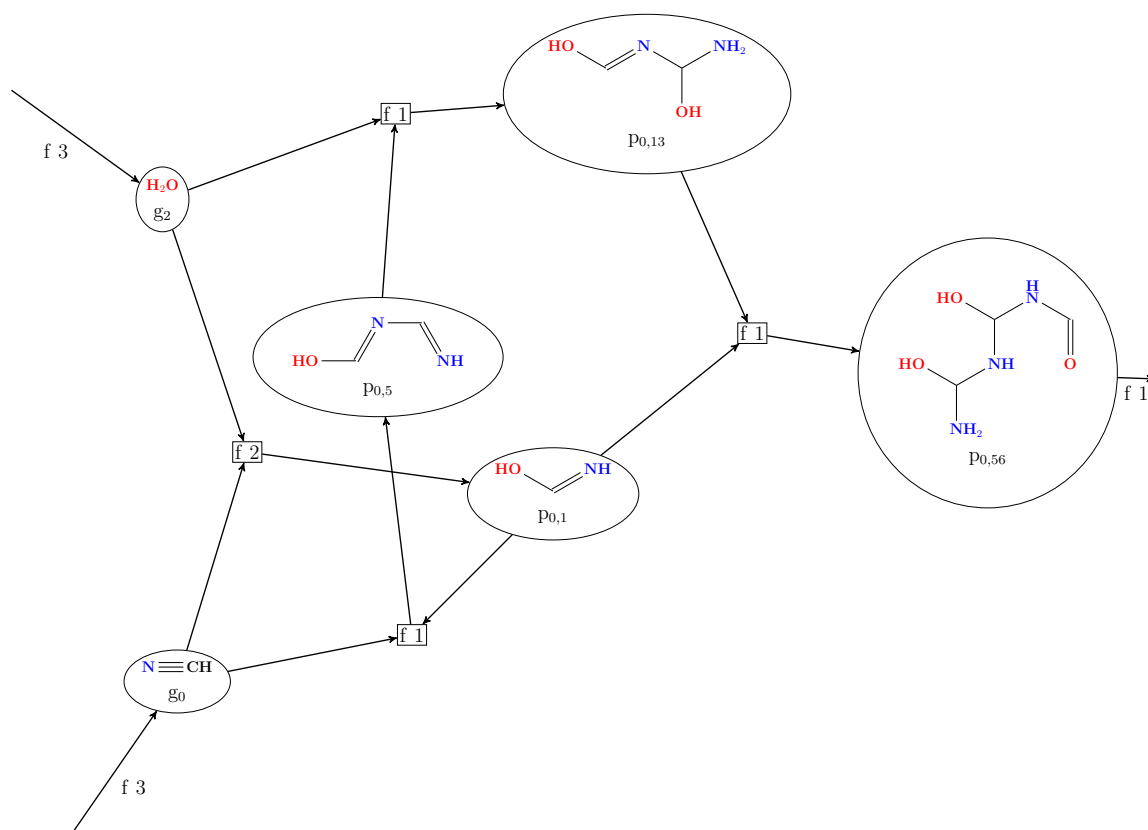
0.3.2 Solution 1

Overall Data

Objective value (non-integral): -0.114802

Vertex/Graph	In	Out	G	logK	t_order
$g_{\{0\}}$	3	0	-5.507141	1.000000	0
$g_{\{2\}}$	3	0	-5.068033	1.000000	0
$p_{\{0,13\}}$	0	0	-21.240635	1.000000	65
$p_{\{0,1\}}$	0	0	-10.610080	1.000000	1
$p_{\{0,56\}}$	0	1	-31.869324	0.000000	67
$p_{\{0,5\}}$	0	0	-16.158998	0.000000	2

Filtered Graph



File: out/038_dg_0_11100_f_0_1_filt

Vertex	InFlow	OutFlow	$x_v^{\Delta G^0}$	x_v^K	$x_v^{\Delta G}$	t_v
g_0	3	0	-14458.99666	1.0	-14455.670875	0
g_2	3	0	-13306.118349	1.0	-13302.792564	0
$p_{0,1}$	0	0	-27856.761341	1.0	-27853.435556	1
$p_{0,5}$	0	0	-42425.44262	0.0	-42425.44262	2
$p_{0,13}$	0	0	-55767.279594	1.0	-55763.953809	65
$p_{0,56}$	0	1	-83672.898792	0.0	-83672.898792	67

Hyperedge	Source	Target	Flow	$x_e^{\Delta G}$	$\bar{x}_e^{\Delta G}$
6	$g_0, g_2,$	$p_{0,1},$	2	-94.747627	-94.747627
14	$g_0, p_{0,1},$	$p_{0,5},$	1	-115.887209	-115.887209
123	$g_2, p_{0,5},$	$p_{0,13},$	1	-35.718625	-35.718625
263	$p_{0,1}, p_{0,13},$	$p_{0,56},$	1	-55.060446	-55.060446
Sum				-301.4139068038242	

$$\Delta G = -39.61615277046527$$

$$\Delta E = -0.1148024940744313$$

$$|E| = 5$$

$$|U| = 4$$

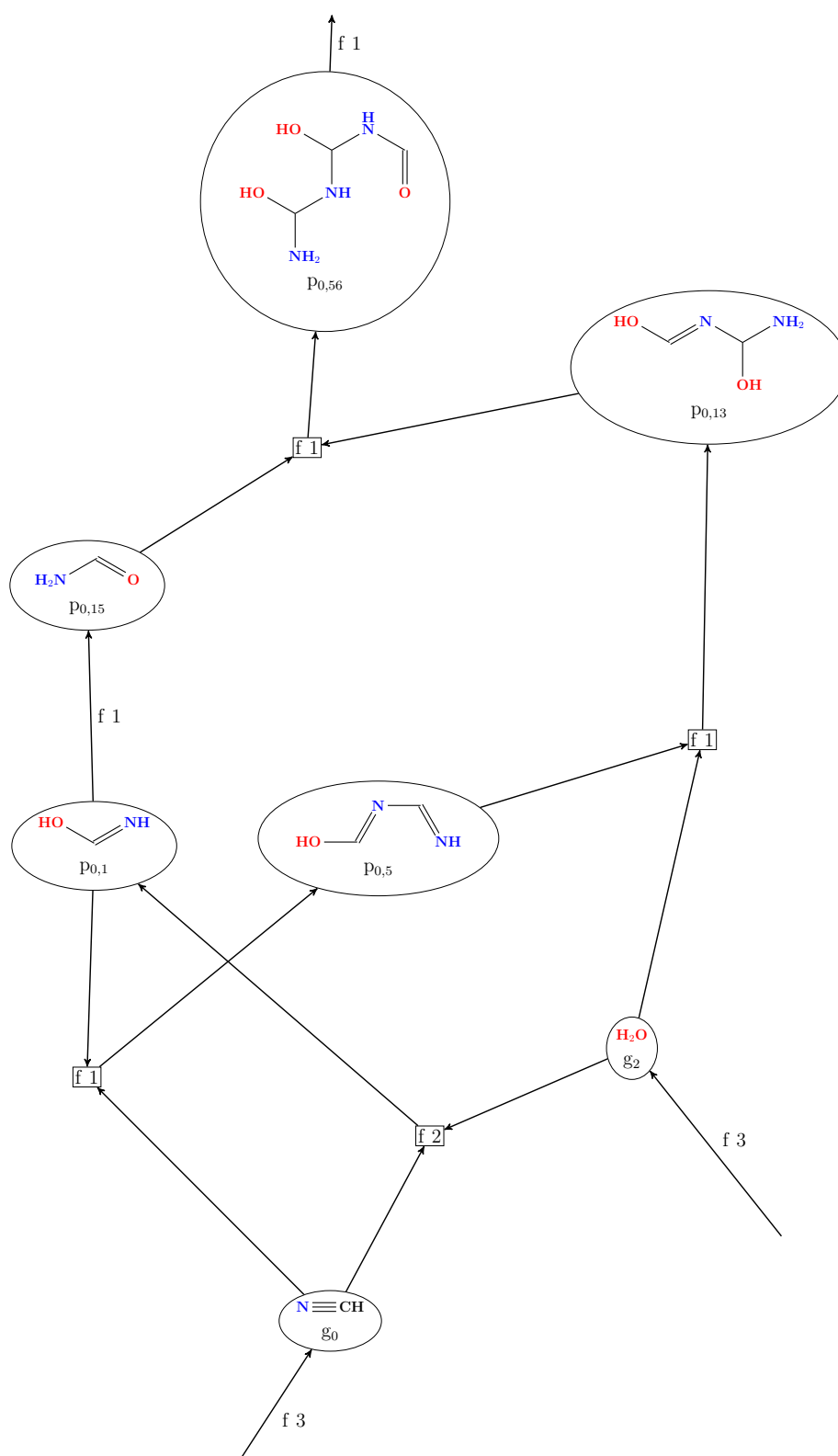
0.3.3 Solution 2

Overall Data

Objective value (non-integral): -0.114802

Vertex/Graph	In	Out	G	logK	t_order
g_{0}	3	0	-5.507152	1.000000	0
g_{2}	3	0	-5.068043	0.000000	0
p_{0,13}	0	0	-21.240678	0.000000	23
p_{0,15}	0	0	-10.625195	0.000000	22
p_{0,1}	0	0	-10.610101	1.000000	21
p_{0,56}	0	1	-31.869260	1.000000	67
p_{0,5}	0	0	-16.158998	0.000000	22

Filtered Graph



File: out/049_dg_0_11100_f_0_2_filt

Vertex	InFlow	OutFlow	$x_v^{\Delta G^0}$	x_v^K	$x_v^{\Delta G}$	t_v
g_0	3	0	-14459.025578	1.0	-14455.699793	0
g_2	3	0	-13306.144961	0.0	-13306.144961	0
$p_{0,1}$	0	0	-27856.817054	1.0	-27853.491269	21
$p_{0,5}$	0	0	-42425.44262	0.0	-42425.44262	22
$p_{0,13}$	0	0	-55767.391129	0.0	-55767.391129	23
$p_{0,15}$	0	0	-27896.445756	0.0	-27896.445756	22
$p_{0,56}$	0	1	-83672.731446	1.0	-83669.405661	67

Hyperedge	Source	Target	Flow	$x_e^{\Delta G}$	$\bar{x}_e^{\Delta G}$
6	$g_0, g_2,$	$p_{0,1},$	2	-91.646516	-91.646516
14	$g_0, p_{0,1},$	$p_{0,5},$	1	-115.802577	-115.802577
36	$p_{0,1},$	$p_{0,15},$	1	-42.729996	-42.729996
123	$g_2, p_{0,5},$	$p_{0,13},$	1	-35.803547	-35.803547
169	$p_{0,13}, p_{0,15},$	$p_{0,56},$	1	-5.793267	-5.793267
Sum					-301.4139068038162

$$\Delta G = -38.34224117924221$$

$$\Delta E = -0.11480249407442823$$

$$|E| = 6$$

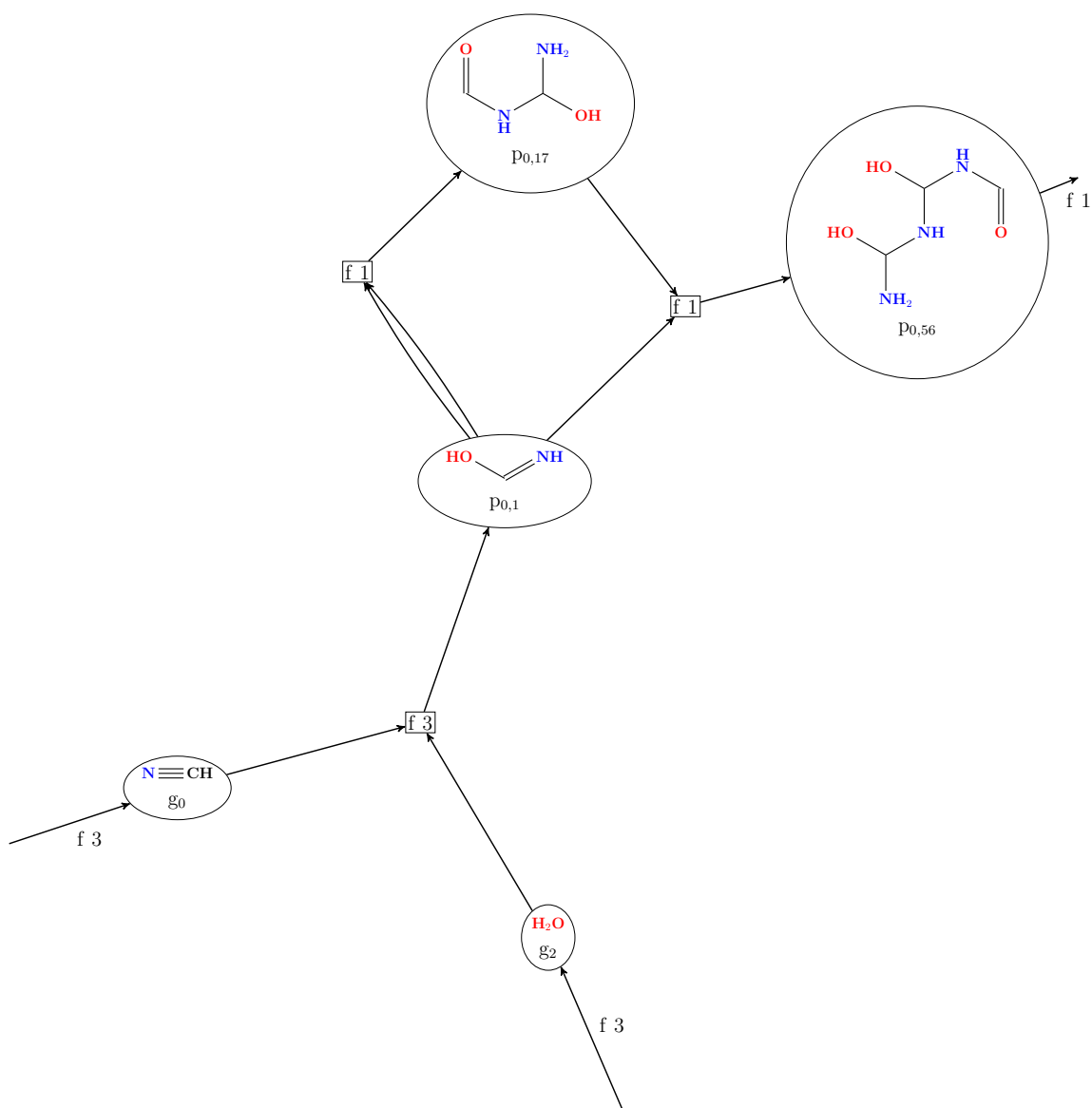
$$|U| = 5$$

0.3.4 Solution 3

Overall Data

Objective value (non-integral): -0.078715						
Vertex/Graph	In	Out	G	logK	t_order	
$g_{\{0\}}$	3	0	-5.507152	1.000000	0	
$g_{\{2\}}$	3	0	-5.068043	1.000000	20	
$p_{\{0,17\}}$	0	0	-21.248844	1.000000	43	
$p_{\{0,1\}}$	0	0	-10.610080	1.000000	21	
$p_{\{0,56\}}$	0	1	-31.869324	0.000000	67	

Filtered Graph



File: out/058_dg_0_11100_f_0_3_filt

Vertex	InFlow	OutFlow	$x_v^{\Delta G^0}$	x_v^K	$x_v^{\Delta G}$	t_v
g_0	3	0	-14459.025578	1.0	-14455.699793	0
g_2	3	0	-13306.144961	1.0	-13302.819176	20
$p_{0,1}$	0	0	-27856.761341	1.0	-27853.435556	21
$p_{0,17}$	0	0	-55788.832737	1.0	-55785.506952	43
$p_{0,56}$	0	1	-83672.898792	0.0	-83672.898792	67

Hyperedge	Source	Target	Flow	$x_e^{\Delta G}$	$\bar{x}_e^{\Delta G}$
6	$g_0, g_2,$	$p_{0,1},$	3	-94.692097	-94.692097
40	$p_{0,1}, p_{0,1},$	$p_{0,17},$	1	-78.41135	-78.41135
196	$p_{0,1}, p_{0,17},$	$p_{0,56},$	1	-33.507303	-33.507303
Sum					-206.66628000004445

$$\Delta G = -39.599493187602874$$

$$\Delta E = -0.0787150289005472$$

$|E| = 5$
 $|U| = 3$

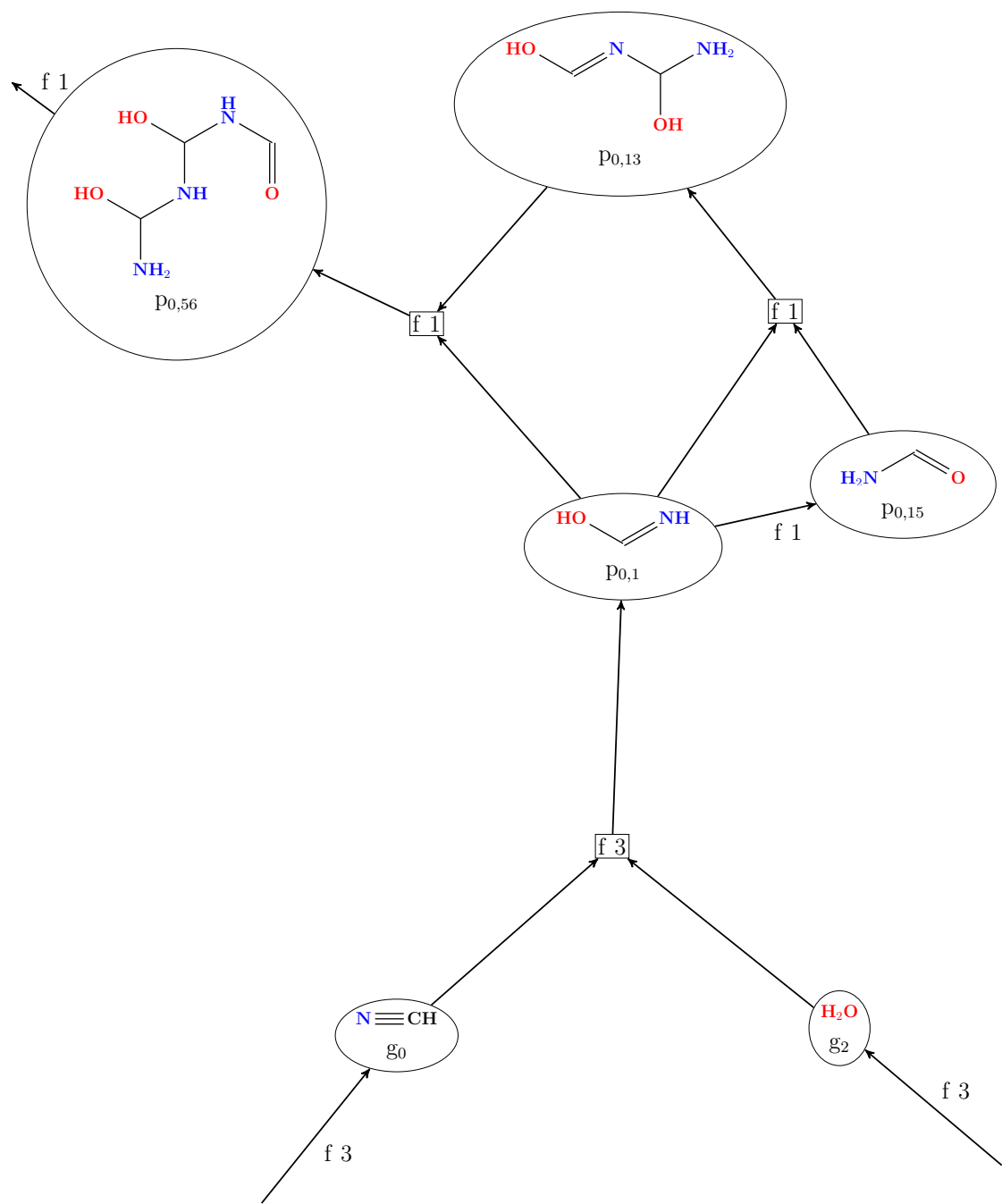
0.3.5 Solution 4

Overall Data

Objective value (non-integral): -0.078715

Vertex/Graph	In	Out	G	logK	t_order
$g_{\{0\}}$	3	0	-5.507152	0.000000	0
$g_{\{2\}}$	3	0	-5.068043	0.000000	0
$p_{\{0,13\}}$	0	0	-21.240678	0.000000	44
$p_{\{0,15\}}$	0	0	-10.625174	0.000000	22
$p_{\{0,1\}}$	0	0	-10.610101	0.000000	21
$p_{\{0,56\}}$	0	1	-31.869260	1.000000	67

Filtered Graph



File: out/067_dg_0_11100_f_0_4_filt

Vertex	InFlow	OutFlow	$x_v^{\Delta G^0}$	x_v^K	$x_v^{\Delta G}$	t_v
g_0	3	0	-14459.025578	0.0	-14459.025578	0
g_2	3	0	-13306.144961	0.0	-13306.144961	0
$p_{0,1}$	0	0	-27856.817054	0.0	-27856.817054	21
$p_{0,13}$	0	0	-55767.391129	0.0	-55767.391129	44
$p_{0,15}$	0	0	-27896.389963	0.0	-27896.389963	22
$p_{0,56}$	0	1	-83672.731446	1.0	-83669.405661	67

Hyperedge	Source	Target	Flow	$x_e^{\Delta G}$	$\bar{x}_e^{\Delta G}$
6	$g_0, g_2,$	$p_{0,1},$	3	-91.646516	-91.646516
36	$p_{0,1},$	$p_{0,15},$	1	-39.572909	-39.572909
192	$p_{0,1}, p_{0,15},$	$p_{0,13},$	1	-14.184112	-14.184112
263	$p_{0,1}, p_{0,13},$	$p_{0,56},$	1	-45.421968	-45.421968
Sum	-206.66628000004445				

$$\Delta G = -37.41185284889831$$

$$\Delta E = -0.0787150289005472$$

$$|E| = 6$$

$$|U| = 4$$

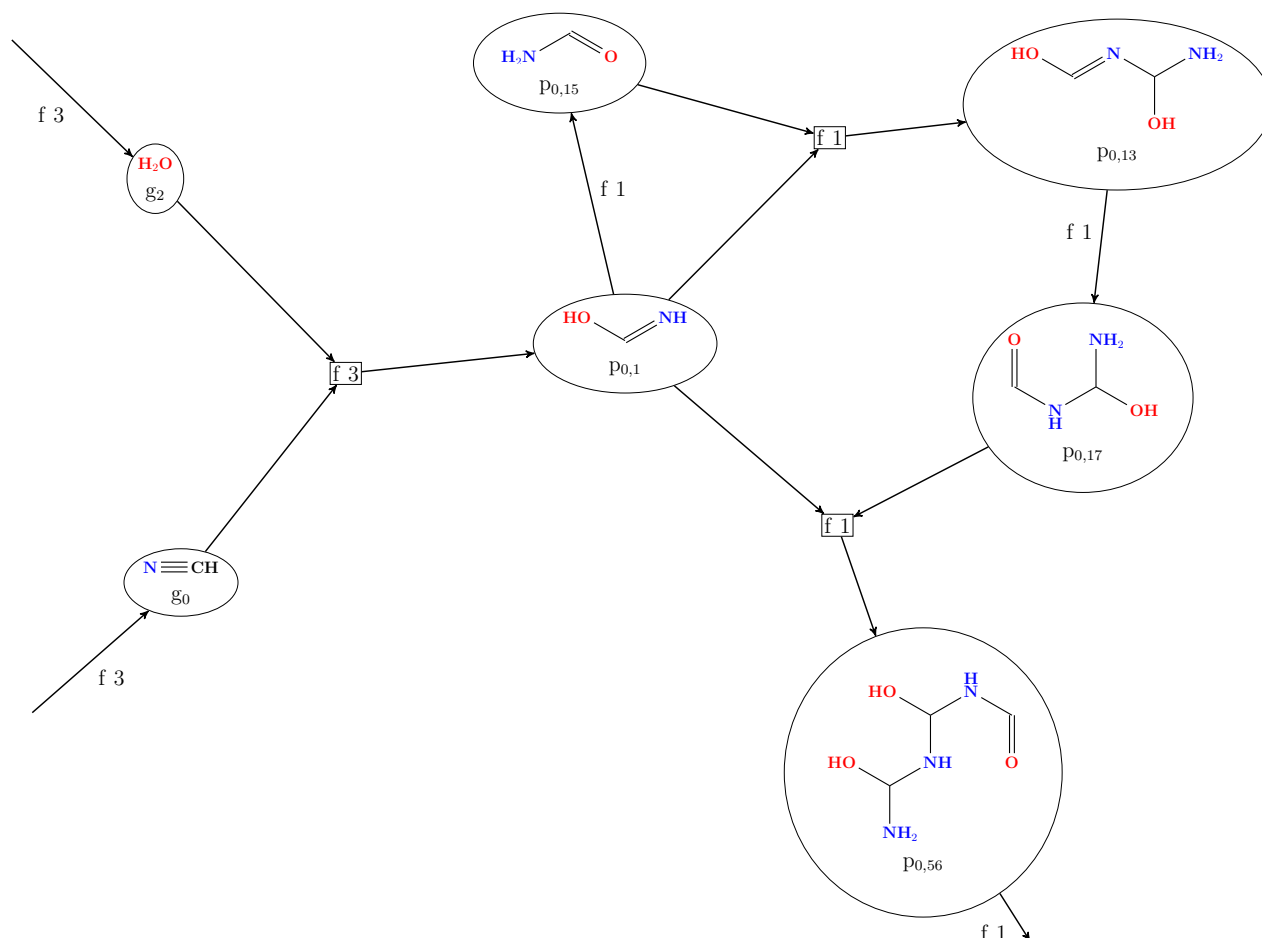
0.3.6 Solution 5

Overall Data

Objective value (non-integral): -0.078715

Vertex/Graph	In	Out	G	logK	t_order
$g_{\{0\}}$	3	0	-5.507152	1.000000	0
$g_{\{2\}}$	3	0	-5.068043	0.000000	0
$p_{\{0,13\}}$	0	0	-21.240635	1.000000	4
$p_{\{0,15\}}$	0	0	-10.625195	1.000000	2
$p_{\{0,17\}}$	0	0	-21.248887	0.000000	65
$p_{\{0,1\}}$	0	0	-10.610080	1.000000	1
$p_{\{0,56\}}$	0	1	-31.869324	0.000000	67

Filtered Graph



File: out/076_dg_0_11100_f_0_5_filt

Vertex	InFlow	OutFlow	$x_v^{\Delta G^0}$	x_v^K	$x_v^{\Delta G}$	t_v
g_0	3	0	-14459.025578	1.0	-14455.699793	0
g_2	3	0	-13306.144961	0.0	-13306.144961	0
$p_{0,1}$	0	0	-27856.761341	1.0	-27853.435556	1
$p_{0,13}$	0	0	-55767.279594	1.0	-55763.953809	4
$p_{0,15}$	0	0	-27896.445756	1.0	-27893.119971	2
$p_{0,17}$	0	0	-55788.944315	0.0	-55788.944315	65
$p_{0,56}$	0	1	-83672.898792	0.0	-83672.898792	67

Hyperedge	Source	Target	Flow	$x_e^{\Delta G}$	$\bar{x}_e^{\Delta G}$
6	$g_0, g_2,$	$p_{0,1},$	3	-91.590802	-91.590802
36	$p_{0,1},$	$p_{0,15},$	1	-39.684415	-39.684415
192	$p_{0,1}, p_{0,15},$	$p_{0,13},$	1	-17.173792	-17.173792
196	$p_{0,1}, p_{0,17},$	$p_{0,56},$	1	-30.294431	-30.294431
250	$p_{0,13},$	$p_{0,17},$	1	-24.766015	-24.766015
Sum				-206.66628000004445	

$$\Delta G = -38.66910564490887$$

$$\Delta E = -0.0787150289005472$$

$|E| = 7$
 $|U| = 5$

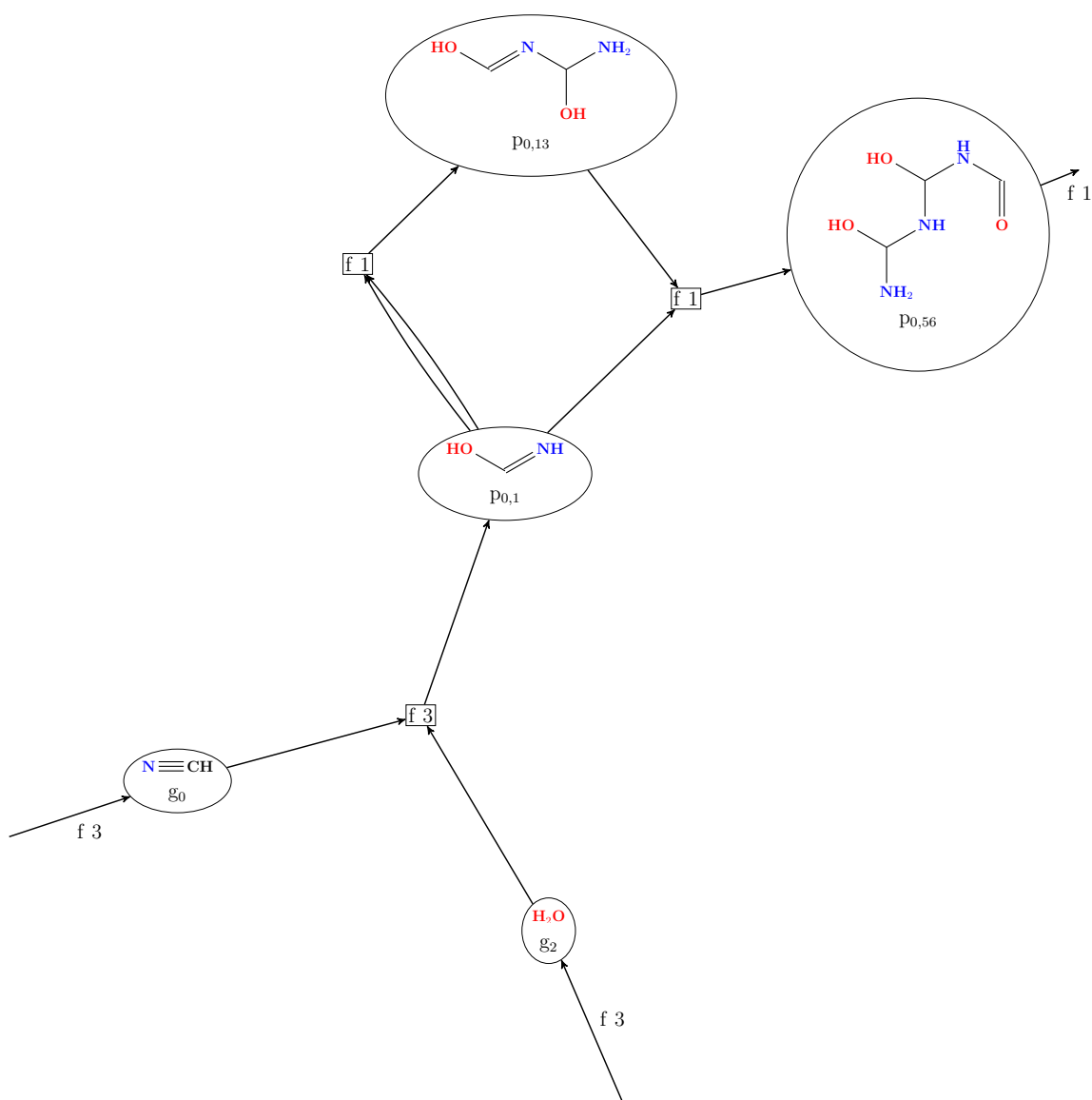
0.3.7 Solution 6

Overall Data

Objective value (non-integral): -0.078715

Vertex/Graph	In	Out	G	logK	t_order
$g_{\{0\}}$	3	0	-5.507152	0.000000	0
$g_{\{2\}}$	3	0	-5.068033	0.000000	20
$p_{\{0,13\}}$	0	0	-21.240635	1.000000	43
$p_{\{0,1\}}$	0	0	-10.610080	1.000000	21
$p_{\{0,56\}}$	0	1	-31.869324	0.000000	67

Filtered Graph



File: out/085_dg_0_11100_f_0_6_filt

Vertex	InFlow	OutFlow	$x_v^{\Delta G^0}$	x_v^K	$x_v^{\Delta G}$	t_v
g_0	3	0	-14459.025578	0.0	-14459.025578	0
g_2	3	0	-13306.118349	0.0	-13306.118349	20
$p_{0,1}$	0	0	-27856.761341	1.0	-27853.435556	21
$p_{0,13}$	0	0	-55767.279594	1.0	-55763.953809	43
$p_{0,56}$	0	1	-83672.898792	0.0	-83672.898792	67

Hyperedge	Source	Target	Flow	$x_e^{\Delta G}$	$\bar{x}_e^{\Delta G}$
6	$g_0, g_2,$	$p_{0,1},$	3	-88.51612	-88.51612
30	$p_{0,1}, p_{0,1},$	$p_{0,13},$	1	-56.858207	-56.858207
263	$p_{0,1}, p_{0,13},$	$p_{0,56},$	1	-55.060446	-55.060446
Sum					-206.66628000004445

$$\Delta G = -37.74670067131874$$

$$\Delta E = -0.0787150289005472$$

$$|E| = 5$$

$$|U| = 3$$

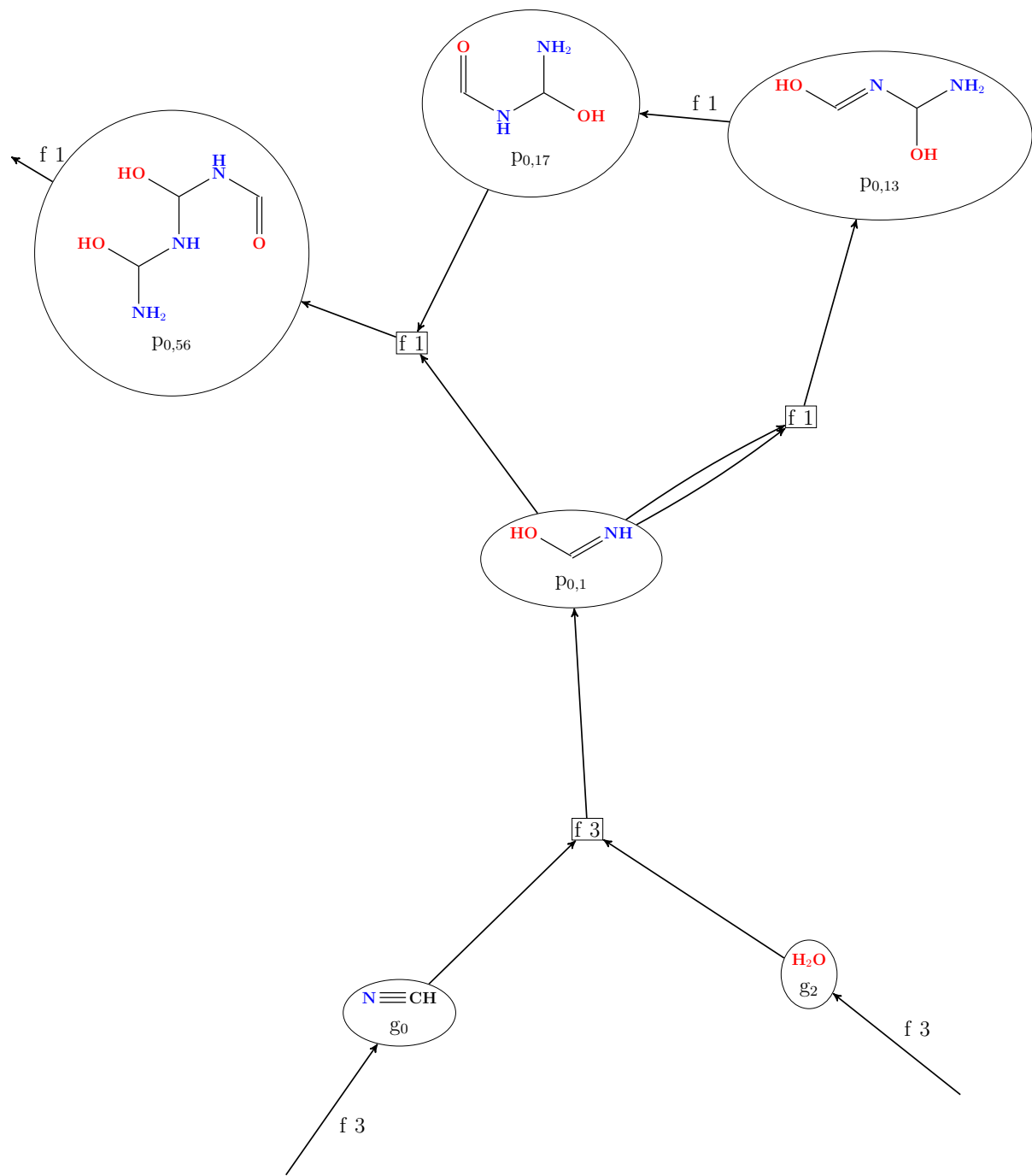
0.3.8 Solution 7

Overall Data

Objective value (non-integral): -0.078715

Vertex/Graph	In	Out	G	logK	t_order
$g_{\{0\}}$	3	0	-5.507152	1.000000	0
$g_{\{2\}}$	3	0	-5.068033	0.000000	0
$p_{\{0,13\}}$	0	0	-21.240635	1.000000	3
$p_{\{0,17\}}$	0	0	-21.248887	1.000000	65
$p_{\{0,1\}}$	0	0	-10.610080	1.000000	1
$p_{\{0,56\}}$	0	1	-31.869324	0.000000	67

Filtered Graph



File: out/094_dg_0_11100_f_0_7_filt

Vertex	InFlow	OutFlow	$x_v^{\Delta G^0}$	x_v^K	$x_v^{\Delta G}$	t_v
g_0	3	0	-14459.025578	1.0	-14455.699793	0
g_2	3	0	-13306.118349	0.0	-13306.118349	0
$p_{0,1}$	0	0	-27856.761341	1.0	-27853.435556	1
$p_{0,13}$	0	0	-55767.279594	1.0	-55763.953809	3
$p_{0,17}$	0	0	-55788.944315	1.0	-55785.61853	65
$p_{0,56}$	0	1	-83672.898792	0.0	-83672.898792	67

Hyperedge	Source	Target	Flow	$x_e^{\Delta G}$	$\bar{x}_e^{\Delta G}$
6	$g_0, g_2,$	$p_{0,1},$	3	-91.617414	-91.617414
30	$p_{0,1}, p_{0,1},$	$p_{0,13},$	1	-56.858207	-56.858207
196	$p_{0,1}, p_{0,17},$	$p_{0,56},$	1	-33.395725	-33.395725
250	$p_{0,13},$	$p_{0,17},$	1	-21.664721	-21.664721
Sum					-206.66628000004445

$$\Delta G = -38.677089264212604$$

$$\Delta E = -0.0787150289005472$$

$$|E| = 6$$

$$|U| = 4$$

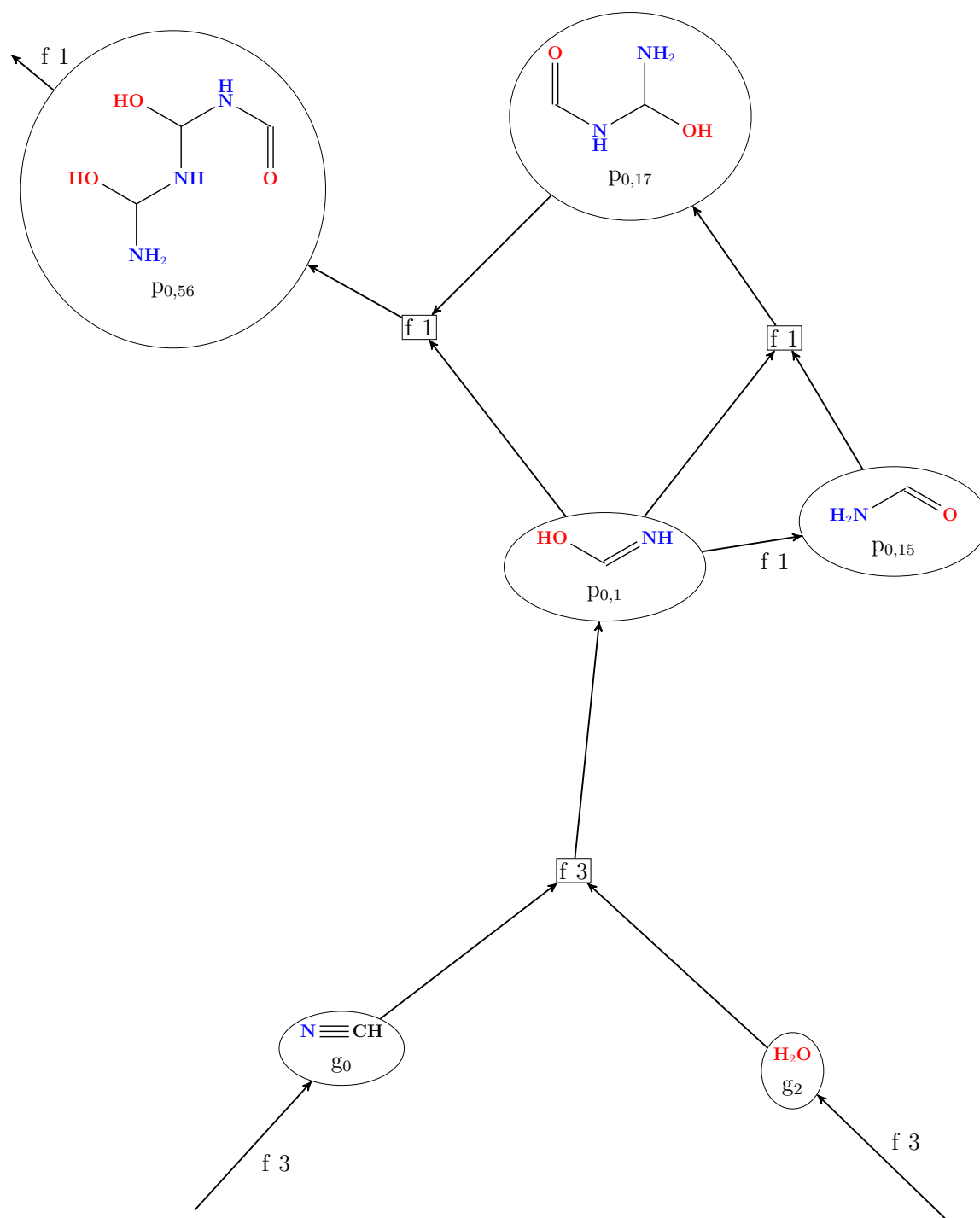
0.3.9 Solution 8

Overall Data

Objective value (non-integral): -0.078715

Vertex/Graph	In	Out	G	logK	t_order
$g_{\{0\}}$	3	0	-5.507152	0.000000	0
$g_{\{2\}}$	3	0	-5.068043	0.000000	20
$p_{\{0,15\}}$	0	0	-10.625195	0.000000	23
$p_{\{0,17\}}$	0	0	-21.248844	1.000000	45
$p_{\{0,1\}}$	0	0	-10.610080	1.000000	21
$p_{\{0,56\}}$	0	1	-31.869324	0.000000	67

Filtered Graph



File: out/103_dg_0_11100_f_0_8_filt

Vertex	InFlow	OutFlow	$x_v^{\Delta G^0}$	x_v^K	$x_v^{\Delta G}$	t_v
g_0	3	0	-14459.025578	0.0	-14459.025578	0
g_2	3	0	-13306.144961	0.0	-13306.144961	20
$p_{0,1}$	0	0	-27856.761341	1.0	-27853.435556	21
$p_{0,15}$	0	0	-27896.445756	0.0	-27896.445756	23
$p_{0,17}$	0	0	-55788.832737	1.0	-55785.506952	45
$p_{0,56}$	0	1	-83672.898792	0.0	-83672.898792	67

Hyperedge	Source	Target	Flow	$x_e^{\Delta G}$	$\bar{x}_e^{\Delta G}$
6	$g_0, g_2,$	$p_{0,1},$	3	-88.489507	-88.489507
36	$p_{0,1},$	$p_{0,15},$	1	-42.785709	-42.785709
183	$p_{0,1}, p_{0,15},$	$p_{0,17},$	1	-35.625641	-35.625641
196	$p_{0,1}, p_{0,17},$	$p_{0,56},$	1	-33.507303	-33.507303
Sum					-206.66628000004573

$$\Delta G = -37.73871678946505$$

$$\Delta E = -0.07871502890054768$$

$$|E| = 6$$

$$|U| = 4$$

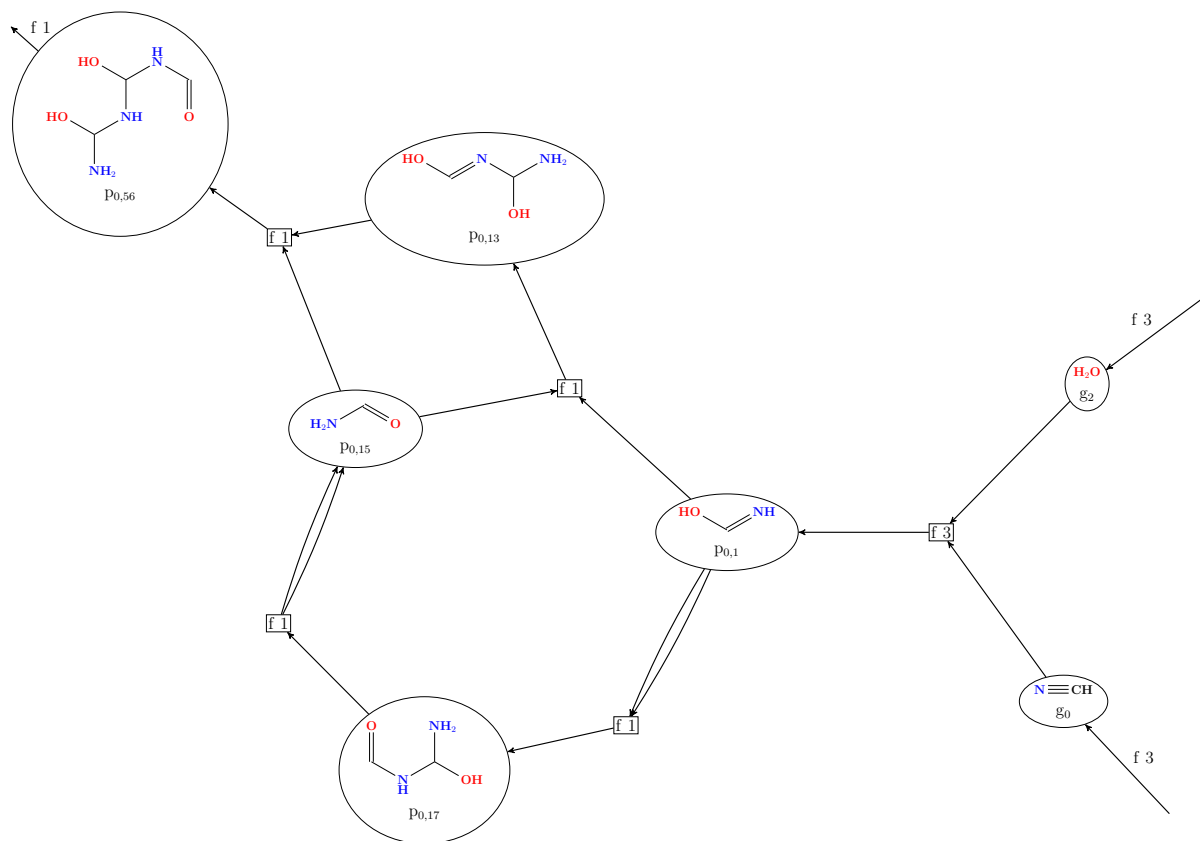
0.3.10 Solution 9

Overall Data

Objective value (non-integral): -0.078715

Vertex/Graph	In	Out	G	logK	t_order
$g_{\{0\}}$	3	0	-5.507152	1.000000	0
$g_{\{2\}}$	3	0	-5.068043	0.000000	0
$p_{\{0,13\}}$	0	0	-21.240635	1.000000	39
$p_{\{0,15\}}$	0	0	-10.625174	1.000000	27
$p_{\{0,17\}}$	0	0	-21.248887	0.761252	26
$p_{\{0,1\}}$	0	0	-10.610101	0.000000	11
$p_{\{0,56\}}$	0	1	-31.869324	0.000000	67

Filtered Graph



File: out/112_dg_0_11100_f_0_9_filt

Vertex	InFlow	OutFlow	$x_v^{\Delta G^0}$	x_v^K	$x_v^{\Delta G}$	t_v
g_0	3	0	-14459.025578	1.0	-14455.699793	0
g_2	3	0	-13306.144961	0.0	-13306.144961	0
$p_{0,1}$	0	0	-27856.817054	0.0	-27856.817054	11
$p_{0,13}$	0	0	-55767.279594	1.0	-55763.953809	39
$p_{0,15}$	0	0	-27896.389963	1.0	-27893.064178	27
$p_{0,17}$	0	0	-55788.944315	0.761252	-55786.412556	26
$p_{0,56}$	0	1	-83672.898792	0.0	-83672.898792	67

Hyperedge	Source	Target	Flow	$x_e^{\Delta G}$	$\bar{x}_e^{\Delta G}$
6	$g_0, g_2,$	$p_{0,1},$	3	-94.74781	-94.74781
40	$p_{0,1}, p_{0,1},$	$p_{0,17},$	1	-72.949341	-72.949341
169	$p_{0,13}, p_{0,15},$	$p_{0,56},$	1	-15.431824	-15.431824
192	$p_{0,1}, p_{0,15},$	$p_{0,13},$	1	-14.072577	-14.072577
237	$p_{0,17},$	$p_{0,15}, p_{0,15},$	1	0.006113	0.006113
Sum					-206.6662800000398

$$\Delta G = -38.66910485725898$$

$$\Delta E = -0.07871502890054542$$

$$|E| = 7$$

$$|U| = 5$$

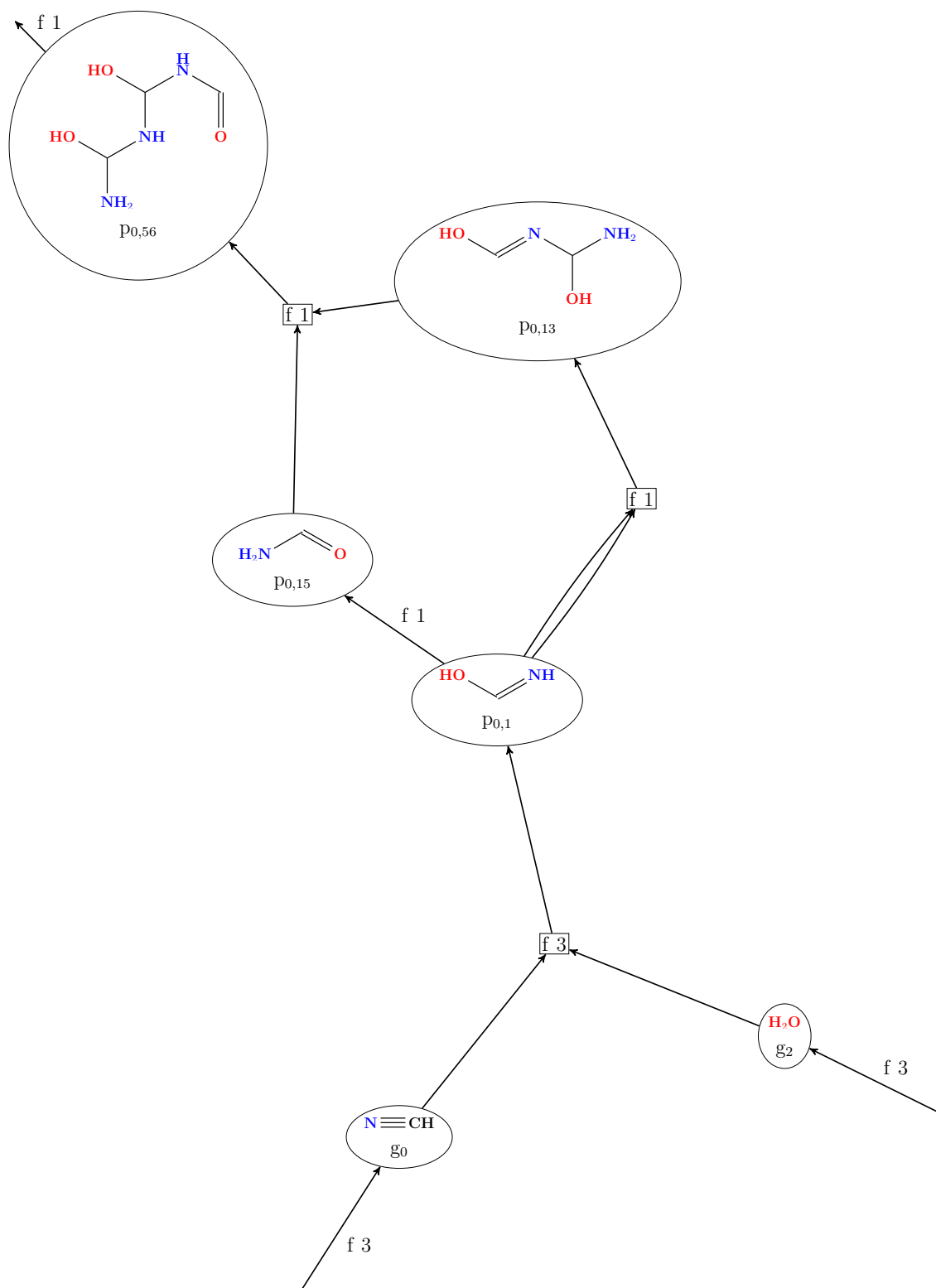
0.3.11 Solution 10

Overall Data

Objective value (non-integral): -0.078715

Vertex/Graph	In	Out	G	logK	t_order
g_{0}	3	0	-5.507152	1.000000	0
g_{2}	3	0	-5.068043	0.000000	0
p_{0,13}	0	0	-21.240678	0.000000	3
p_{0,15}	0	0	-10.625195	1.000000	2
p_{0,1}	0	0	-10.610101	1.000000	1
p_{0,56}	0	1	-31.869324	0.000000	67

Filtered Graph



File: out/121_dg_0_11100_f_0_10_filt

Vertex	InFlow	OutFlow	$x_v^{\Delta G^0}$	x_v^K	$x_v^{\Delta G}$	t_v
g_0	3	0	-14459.025578	1.0	-14455.699793	0
g_2	3	0	-13306.144961	0.0	-13306.144961	0
$p_{0,1}$	0	0	-27856.817054	1.0	-27853.491269	1
$p_{0,13}$	0	0	-55767.391129	0.0	-55767.391129	3
$p_{0,15}$	0	0	-27896.445756	1.0	-27893.119971	2
$p_{0,56}$	0	1	-83672.898792	0.0	-83672.898792	67

Hyperedge	Source	Target	Flow	$x_e^{\Delta G}$	$\bar{x}_e^{\Delta G}$
6	$g_0, g_2,$	$p_{0,1},$	3	-91.646516	-91.646516
30	$p_{0,1}, p_{0,1},$	$p_{0,13},$	1	-59.959609	-59.959609
36	$p_{0,1},$	$p_{0,15},$	1	-39.628701	-39.628701
169	$p_{0,13}, p_{0,15},$	$p_{0,56},$	1	-12.163202	-12.163202
Sum					-206.6662800000364

$$\Delta G = -38.66910538235891$$

$$\Delta E = -0.07871502890054413$$

$$|E| = 6$$

$$|U| = 4$$

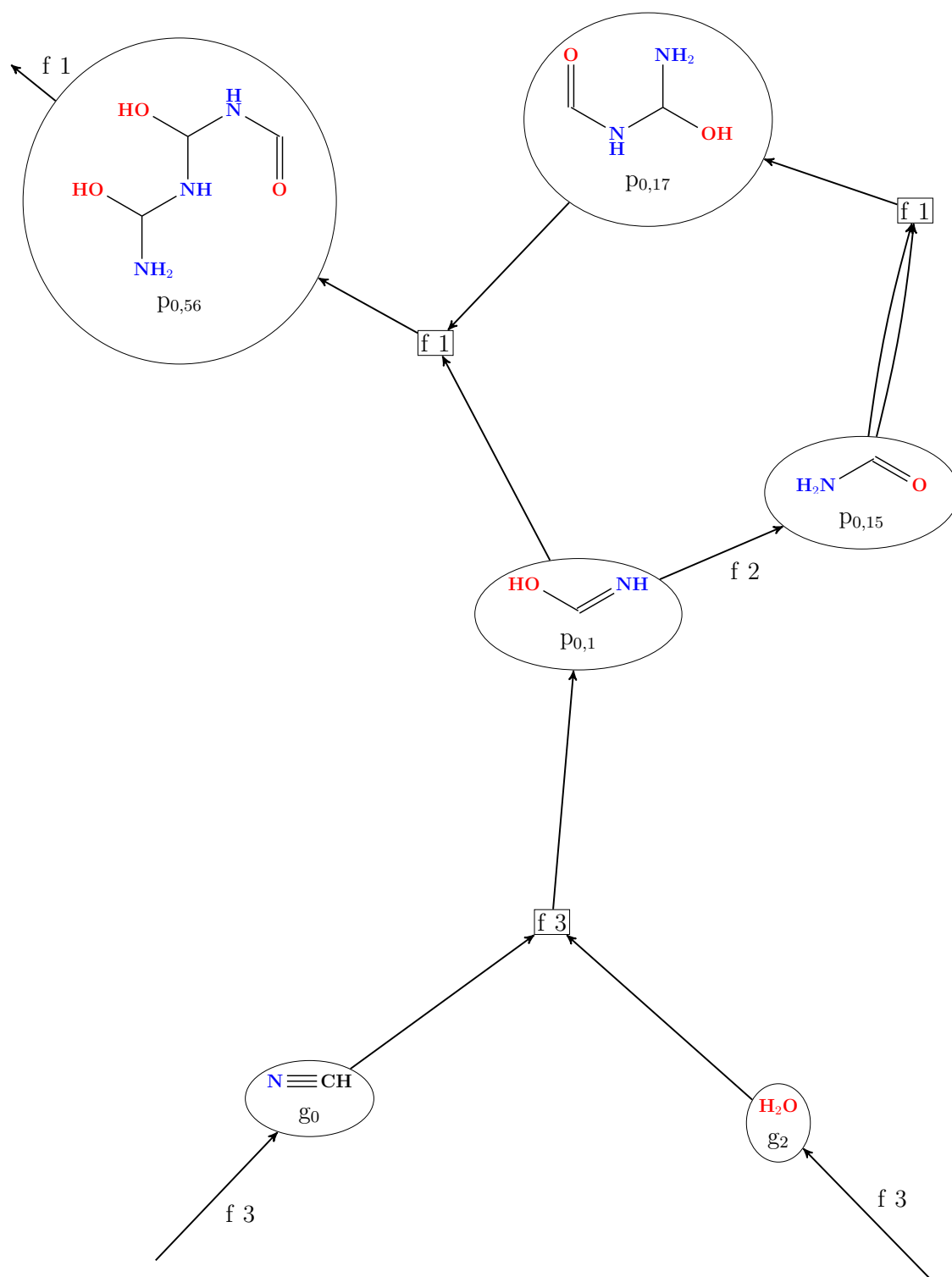
0.3.12 Solution 11

Overall Data

Objective value (non-integral): -0.0636213

Vertex/Graph	In	Out	G	logK	t_order
$g_{\{0\}}$	3	0	-5.507152	1.000000	0
$g_{\{2\}}$	3	0	-5.068033	1.000000	0
$p_{\{0,15\}}$	0	0	-10.625174	1.000000	22
$p_{\{0,17\}}$	0	0	-21.248844	0.727245	45
$p_{\{0,1\}}$	0	0	-10.610080	1.000000	21
$p_{\{0,56\}}$	0	1	-31.869324	0.000000	67

Filtered Graph



File: out/130_dg_0_11100_f_0_11_filt

Vertex	InFlow	OutFlow	$x_v^{\Delta G^0}$	x_v^K	$x_v^{\Delta G}$	t_v
g_0	3	0	-14459.025578	1.0	-14455.699793	0
g_2	3	0	-13306.118349	1.0	-13302.792564	0
$p_{0,1}$	0	0	-27856.761341	1.0	-27853.435556	21
$p_{0,15}$	0	0	-27896.389963	1.0	-27893.064178	22
$p_{0,17}$	0	0	-55788.832737	0.727245	-55786.414077	45
$p_{0,56}$	0	1	-83672.898792	0.0	-83672.898792	67

Hyperedge	Source	Target	Flow	$x_e^{\Delta G}$	$\bar{x}_e^{\Delta G}$
6	$g_0, g_2,$	$p_{0,1},$	3	-94.718709	-94.718709
36	$p_{0,1},$	$p_{0,15},$	2	-39.628622	-39.628622
180	$p_{0,15}, p_{0,15},$	$p_{0,17},$	1	0.0	0.0
196	$p_{0,1}, p_{0,17},$	$p_{0,56},$	1	-32.661409	-32.661409
Sum					-167.0376578962506

$$\Delta G = -39.60747706945657$$

$$\Delta E = -0.06362128388230656$$

$$|E| = 7$$

$$|U| = 4$$

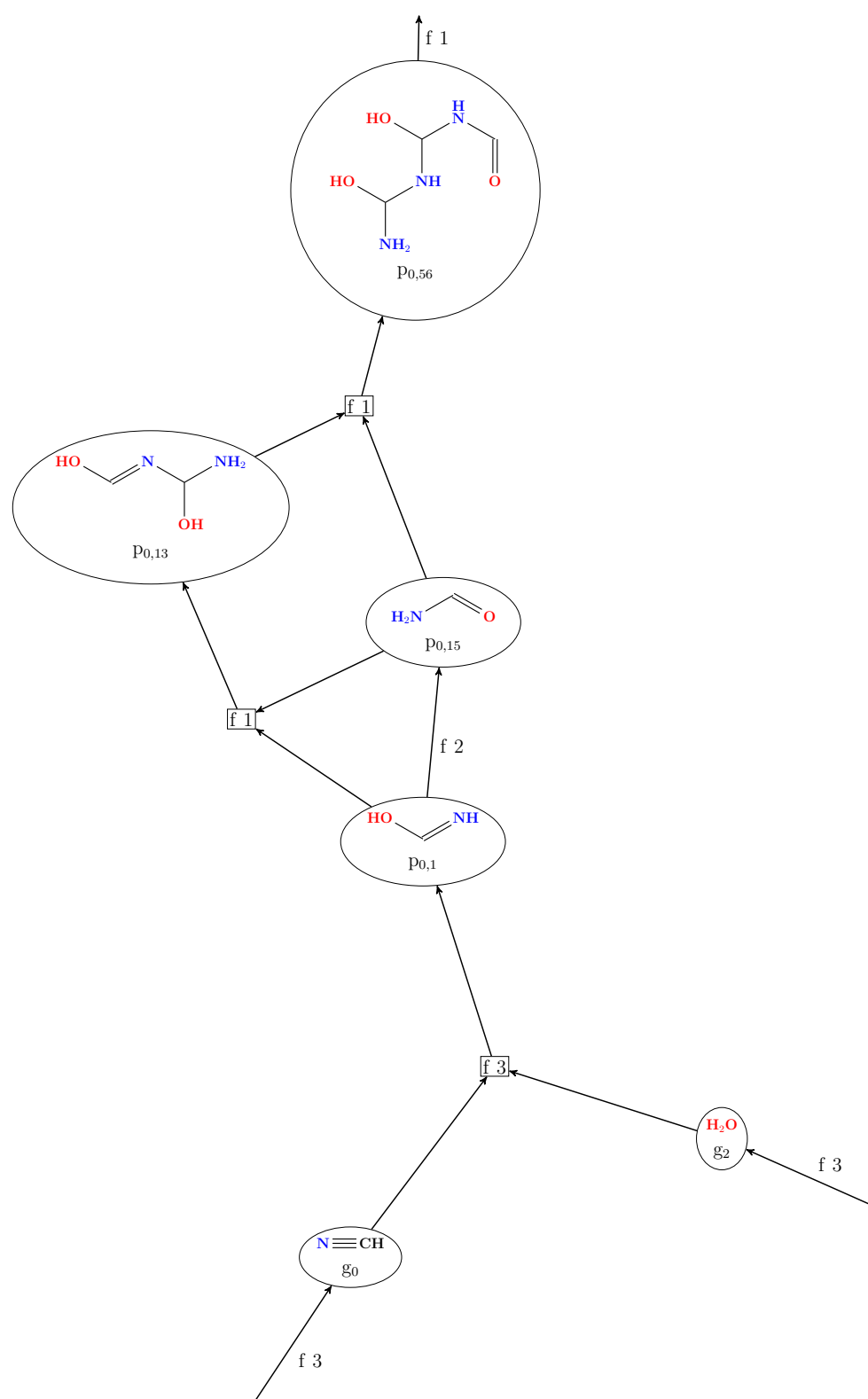
0.3.13 Solution 12

Overall Data

Objective value (non-integral): -0.0636213

Vertex/Graph	In	Out	G	logK	t_order
$g_{\{0\}}$	3	0	-5.507152	1.000000	0
$g_{\{2\}}$	3	0	-5.068043	1.000000	0
$p_{\{0,13\}}$	0	0	-21.240678	0.000000	4
$p_{\{0,15\}}$	0	0	-10.625174	1.000000	2
$p_{\{0,1\}}$	0	0	-10.610080	1.000000	1
$p_{\{0,56\}}$	0	1	-31.869324	0.000000	67

Filtered Graph



File: out/139_dg_0_11100_f_0_12_filt

Vertex	InFlow	OutFlow	$x_v^{\Delta G^0}$	x_v^K	$x_v^{\Delta G}$	t_v
g_0	3	0	-14459.025578	1.0	-14455.699793	0
g_2	3	0	-13306.144961	1.0	-13302.819176	0
$p_{0,1}$	0	0	-27856.761341	1.0	-27853.435556	1
$p_{0,13}$	0	0	-55767.391129	0.0	-55767.391129	4
$p_{0,15}$	0	0	-27896.389963	1.0	-27893.064178	2
$p_{0,56}$	0	1	-83672.898792	0.0	-83672.898792	67

Hyperedge	Source	Target	Flow	$x_e^{\Delta G}$	$\bar{x}_e^{\Delta G}$
6	$g_0, g_2,$	$p_{0,1},$	3	-94.692097	-94.692097
36	$p_{0,1},$	$p_{0,15},$	2	-39.628622	-39.628622
169	$p_{0,13}, p_{0,15},$	$p_{0,56},$	1	-12.218995	-12.218995
192	$p_{0,1}, p_{0,15},$	$p_{0,13},$	1	-20.442414	-20.442414
Sum					-167.03765789624

$$\Delta G = -39.59949345015284$$

$$\Delta E = -0.06362128388230252$$

$$|E| = 7$$

$$|U| = 4$$