

# Summary

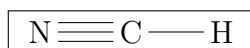
December 7, 2024

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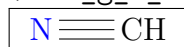
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## 0.1 Loaded Graphs

### 0.1.1 g\_{0}

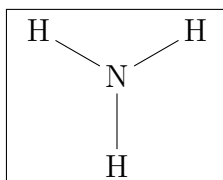


File: out/001\_g\_0\_10300000

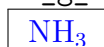


File: out/003\_g\_0\_11310100

### 0.1.2 g\_{1}

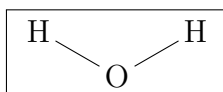


File: out/005\_g\_1\_10300000

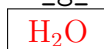


File: out/007\_g\_1\_11310100

### 0.1.3 g\_{2}



File: out/009\_g\_2\_10300000



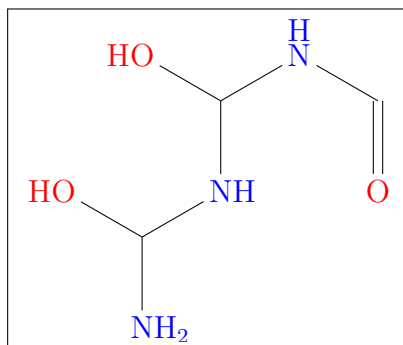
File: out/011\_g\_2\_11310100

## 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

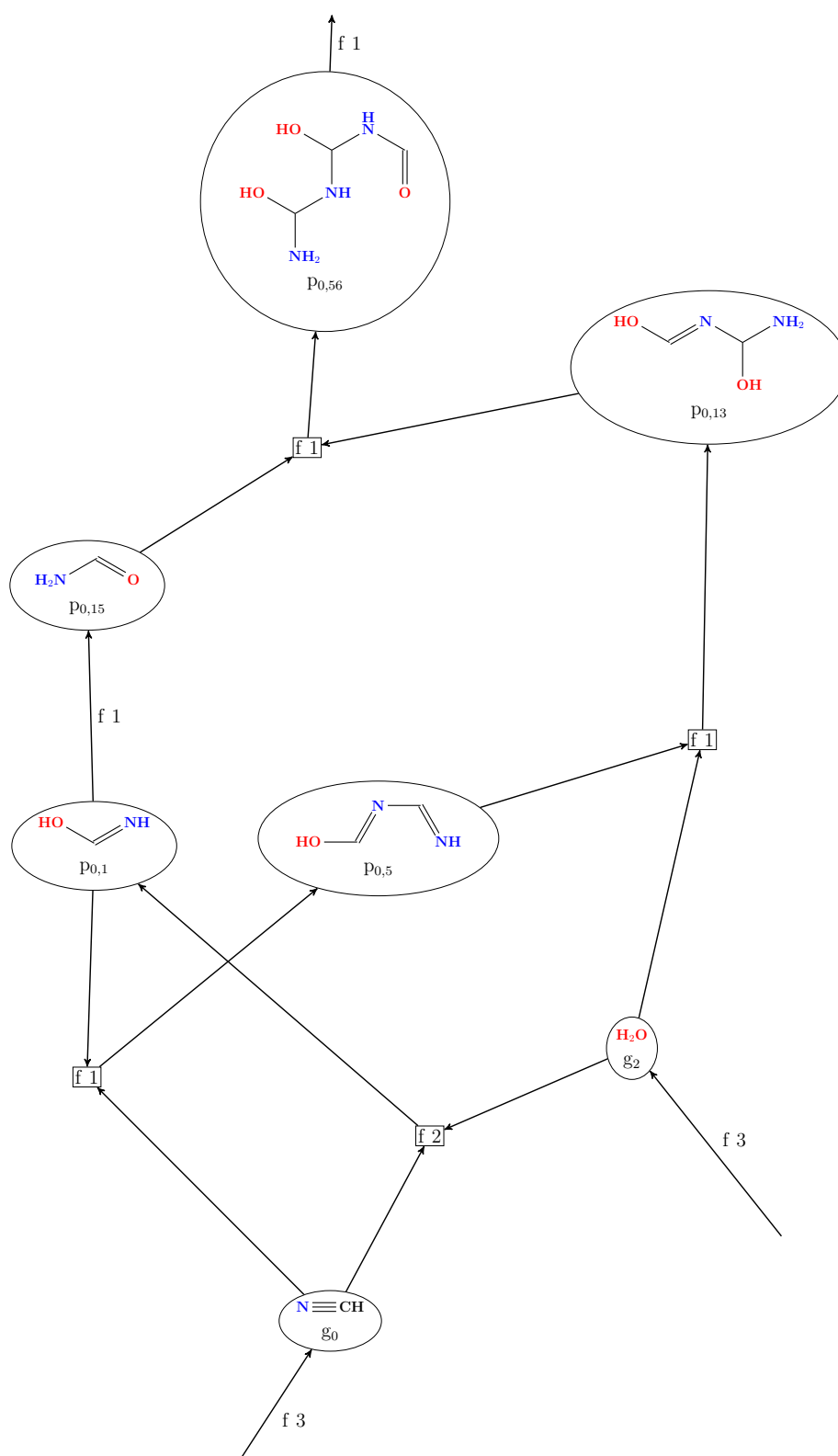
### 0.3.1 Solution 0

#### Overall Data

Objective value (non-integral): -0.126314

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	-2.194685	3
p_{0,15}	0	0	-10.625174	-6.000000	2
p_{0,1}	0	0	-10.610101	1.000000	1
p_{0,56}	0	1	-31.869324	-6.000000	67
p_{0,5}	0	0	-16.158998	1.000000	2

## Filtered Graph



File: out/031\_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	-2.194685	-55774.690179	3
$p_{0,15}$	0	0	-27896.389963	-6.0	-27916.344673	2
$p_{0,56}$	0	1	-83672.898792	-6.0	-83692.853502	67

Hyperedge	Source	Target	Flow	$x_e^{\Delta G}$	$\bar{x}_e^{\Delta G}$
6	$g_0, g_2,$	$p_{0,1},$	2	-95.803747	-95.803747
14	$g_0, p_{0,1},$	$p_{0,5},$	1	-113.75722	-113.75722
36	$p_{0,1},$	$p_{0,15},$	1	-68.673528	-68.673528
123	$g_2, p_{0,5},$	$p_{0,13},$	1	-53.241823	-53.241823
169	$p_{0,13}, p_{0,15},$	$p_{0,56},$	1	0.006113	0.006113
Sum				-331.6369784208029	

$$\Delta G = -42.72739478549565$$

$$\Delta E = -0.1263138541075885$$

$$|E| = 6$$

$$|U| = 5$$

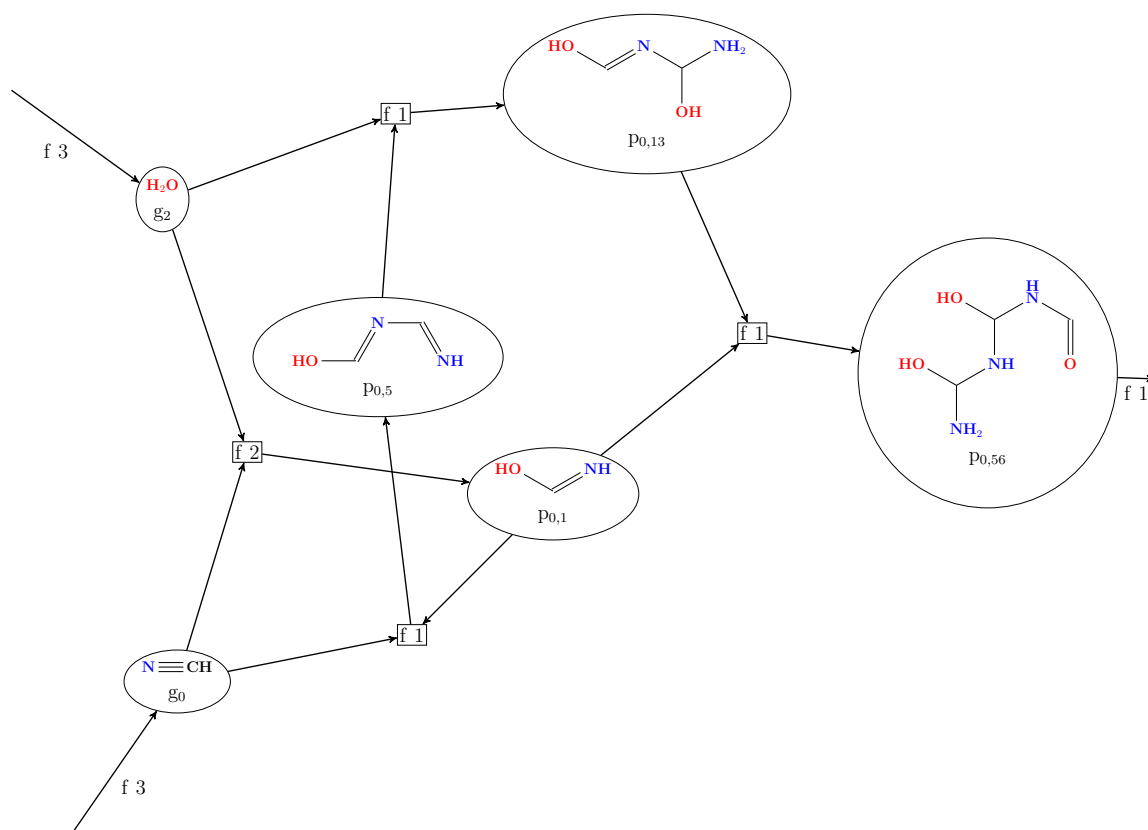
### 0.3.2 Solution 1

#### Overall Data

Objective value (non-integral): -0.126314

Vertex/Graph	In	Out	G	logK	t_order
$g_{\{0\}}$	3	0	-5.507152	1.000000	0
$g_{\{2\}}$	3	0	-5.068043	-6.000000	20
$p_{\{0,13\}}$	0	0	-21.240678	-6.000000	45
$p_{\{0,1\}}$	0	0	-10.610101	1.000000	21
$p_{\{0,56\}}$	0	1	-31.869324	-6.000000	67
$p_{\{0,5\}}$	0	0	-16.158998	1.000000	24

## Filtered Graph



File: out/040\_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	-14459.025578	1.0	-14455.699793	0
$g_2$	3	0	-13306.144961	-6.0	-13326.099672	20
$p_{0,1}$	0	0	-27856.817054	1.0	-27853.491269	21
$p_{0,5}$	0	0	-42425.44262	1.0	-42422.116835	24
$p_{0,13}$	0	0	-55767.391129	-6.0	-55787.345839	45
$p_{0,56}$	0	1	-83672.898792	-6.0	-83692.853502	67

Hyperedge	Source	Target	Flow	$x_e^{\Delta G}$	$\bar{x}_e^{\Delta G}$
6	$g_0, g_2,$	$p_{0,1},$	2	-66.703128	-66.703128
14	$g_0, p_{0,1},$	$p_{0,5},$	1	-113.75722	-113.75722
123	$g_2, p_{0,5},$	$p_{0,13},$	1	-39.960779	-39.960779
263	$p_{0,1}, p_{0,13},$	$p_{0,56},$	1	-52.84784	-52.84784
Sum				-331.6369784208108	

$$\Delta G = -33.99720862062955$$

$$\Delta E = -0.1263138541075915$$

$$|E| = 5$$

$$|U| = 4$$

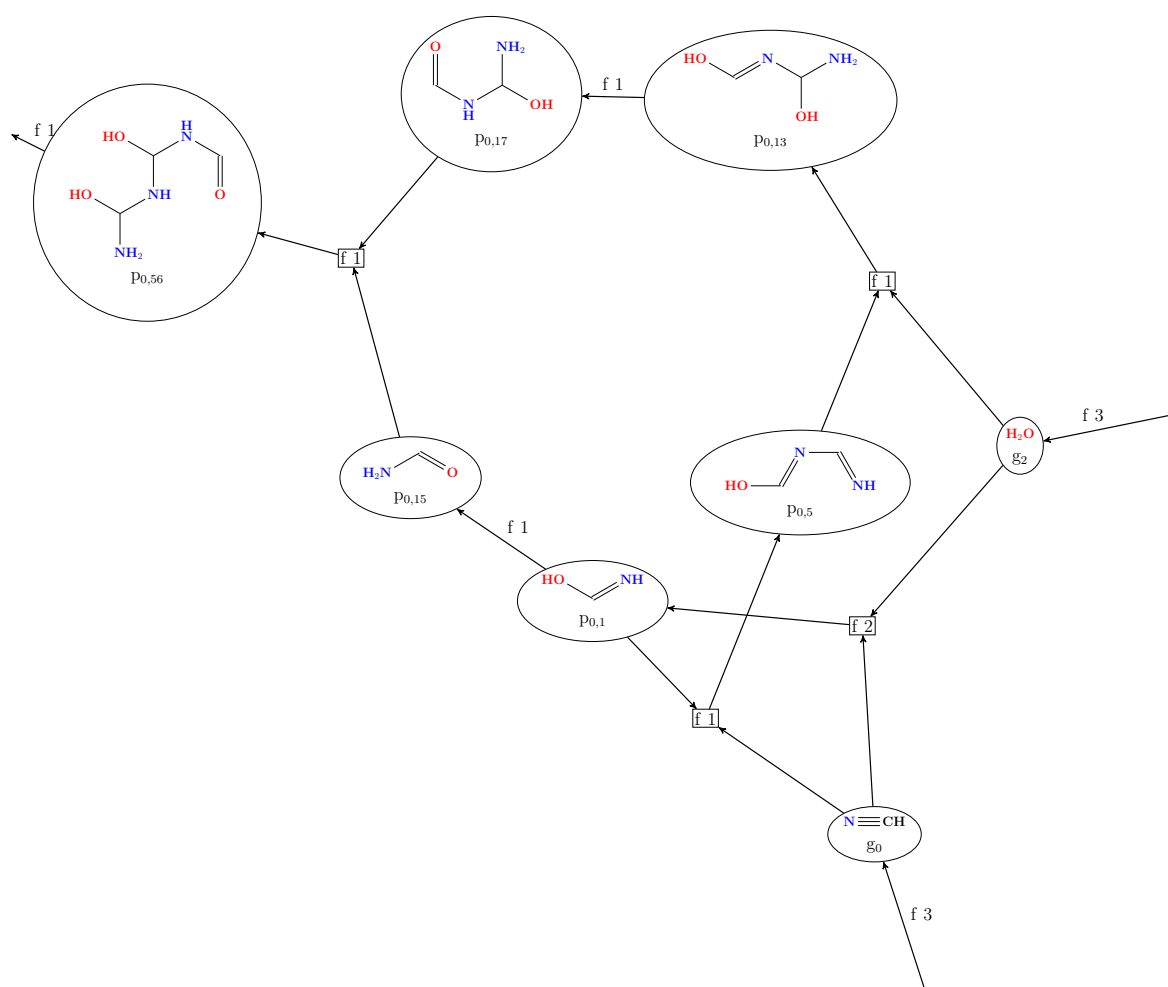
### 0.3.3 Solution 2

#### Overall Data

Objective value (non-integral): -0.126314

Vertex/Graph	In	Out	G	logK	t_order
$g_{\{0\}}$	3	0	-5.507152	1.000000	0
$g_{\{2\}}$	3	0	-5.068043	-6.000000	0
$p_{\{0,13\}}$	0	0	-21.240678	1.000000	3
$p_{\{0,15\}}$	0	0	-10.625174	-4.010180	2
$p_{\{0,17\}}$	0	0	-21.248887	1.000000	64
$p_{\{0,1\}}$	0	0	-10.610101	-6.000000	1
$p_{\{0,56\}}$	0	1	-31.869324	-6.000000	67
$p_{\{0,5\}}$	0	0	-16.158998	1.000000	2

#### Filtered Graph



File: out/051\_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	-6.0	-13326.099672	0
$p_{0,1}$	0	0	-27856.817054	-6.0	-27876.771765	1
$p_{0,5}$	0	0	-42425.44262	1.0	-42422.116835	2
$p_{0,13}$	0	0	-55767.391129	1.0	-55764.065344	3
$p_{0,15}$	0	0	-27896.389963	-4.01018	-27909.72696	2
$p_{0,17}$	0	0	-55788.944315	1.0	-55785.61853	64
$p_{0,56}$	0	1	-83672.898792	-6.0	-83692.853502	67

Hyperedge	Source	Target	Flow	$x_e^{\Delta G}$	$\bar{x}_e^{\Delta G}$
6	$g_0, g_2,$	$p_{0,1},$	2	-95.803747	-95.803747
14	$g_0, p_{0,1},$	$p_{0,5},$	1	-84.6566	-84.6566
36	$p_{0,1},$	$p_{0,15},$	1	-31.300767	-31.300767
123	$g_2, p_{0,5},$	$p_{0,13},$	1	-10.86016	-10.86016
181	$p_{0,15}, p_{0,17},$	$p_{0,56},$	1	0.006113	0.006113
250	$p_{0,13},$	$p_{0,17},$	1	-21.553186	-21.553186
Sum					-331.6369784208091

$\Delta G = -33.99720888317952$

$\Delta E = -0.12631385410759086$

$|E| = 7$

$|U| = 6$

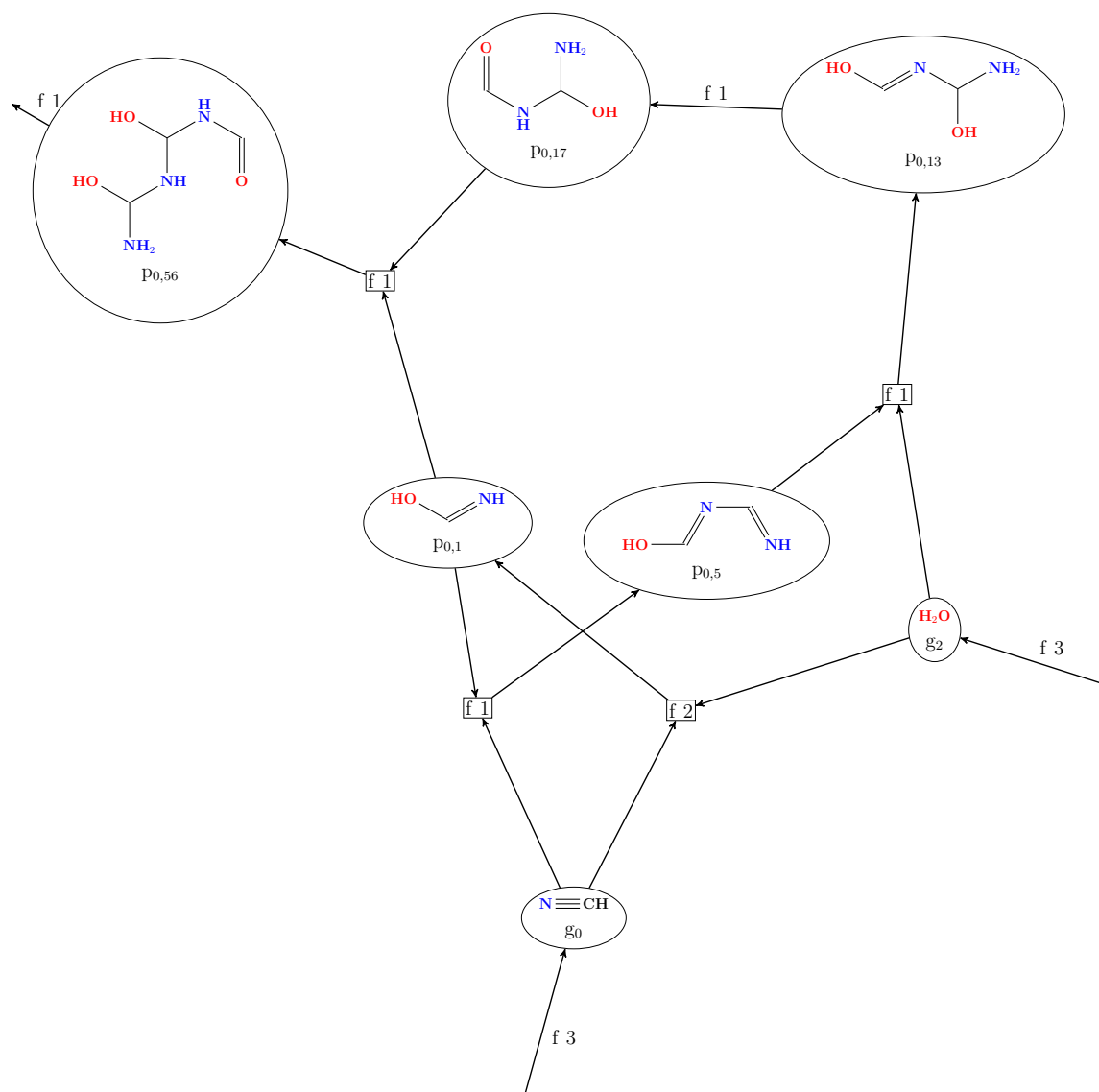
### 0.3.4 Solution 3

#### Overall Data

Objective value (non-integral): -0.126314

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	-4.185975	64
$p_{\{0,17\}}$	0	0	-21.248887	1.000000	65
$p_{\{0,1\}}$	0	0	-10.610101	-6.000000	1
$p_{\{0,56\}}$	0	1	-31.869324	-6.000000	67
$p_{\{0,5\}}$	0	0	-16.158998	1.000000	2

## Filtered Graph



File: out/060\_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	0
$p_{0,1}$	0	0	-27856.817054	-6.0	-27876.771765	1
$p_{0,5}$	0	0	-42425.44262	1.0	-42422.116835	2
$p_{0,13}$	0	0	-55767.391129	-4.185975	-55781.312783	64
$p_{0,17}$	0	0	-55788.944315	1.0	-55785.61853	65
$p_{0,56}$	0	1	-83672.898792	-6.0	-83692.853502	67

Hyperedge	Source	Target	Flow	$x_e^{\Delta G}$	$\bar{x}_e^{\Delta G}$
6	$g_0, g_2,$	$p_{0,1},$	2	-124.904366	-124.904366
14	$g_0, p_{0,1},$	$p_{0,5},$	1	-84.6566	-84.6566
123	$g_2, p_{0,5},$	$p_{0,13},$	1	-61.520078	-61.520078
196	$p_{0,1}, p_{0,17},$	$p_{0,56},$	1	-31.294654	-31.294654
250	$p_{0,13},$	$p_{0,17},$	1	0.006113	0.006113
Sum					-331.6369784208077

$$\Delta G = -42.72739478549565$$

$$\Delta E = -0.1263138541075903$$

$$|E| = 6$$

$$|U| = 5$$

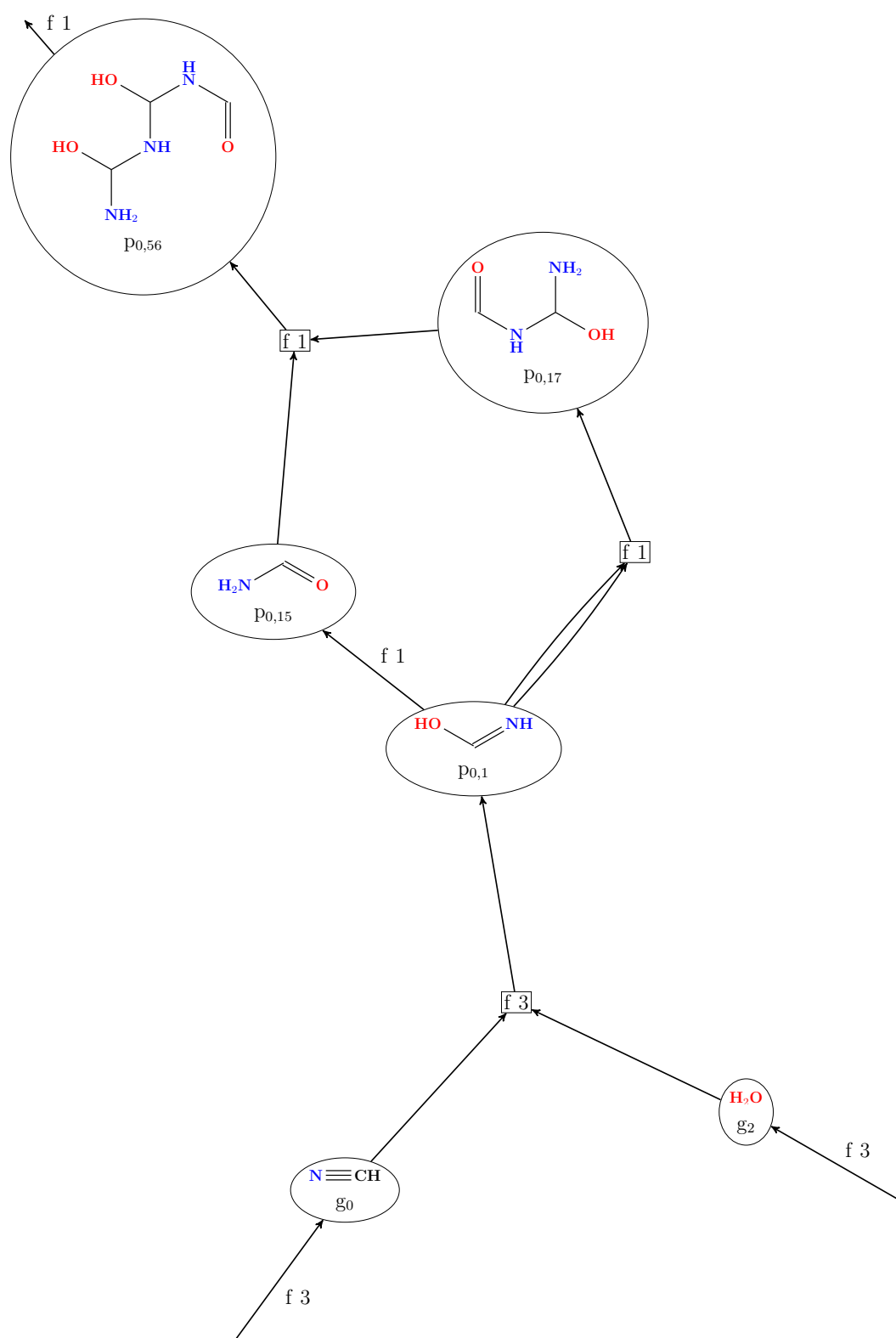
### 0.3.5 Solution 4

#### Overall Data

Objective value (non-integral): -0.0898242

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
$p_{\{0,15\}}$	0	0	-10.625195	-3.996759	23
$p_{\{0,17\}}$	0	0	-21.248887	1.000000	43
$p_{\{0,1\}}$	0	0	-10.610101	-6.000000	21
$p_{\{0,56\}}$	0	1	-31.869324	-6.000000	67

## Filtered Graph



File: out/069\_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	1.0	-14455.699793	0
$g_2$	3	0	-13306.144961	1.0	-13302.819176	0
$p_{0,1}$	0	0	-27856.817054	-6.0	-27876.771765	21
$p_{0,15}$	0	0	-27896.445756	-3.996759	-27909.738119	23
$p_{0,17}$	0	0	-55788.944315	1.0	-55785.61853	43
$p_{0,56}$	0	1	-83672.898792	-6.0	-83692.853502	67

Hyperedge	Source	Target	Flow	$x_e^{\Delta G}$	$\bar{x}_e^{\Delta G}$
6	$g_0, g_2,$	$p_{0,1},$	3	-124.904366	-124.904366
36	$p_{0,1},$	$p_{0,15},$	1	-31.300767	-31.300767
40	$p_{0,1}, p_{0,1},$	$p_{0,17},$	1	-21.266199	-21.266199
181	$p_{0,15}, p_{0,17},$	$p_{0,56},$	1	0.006113	0.006113
Sum	-235.8334148645266				

$$\Delta G = -42.72739452294568$$

$$\Delta E = -0.08982420386514894$$

$$|E| = 6$$

$$|U| = 4$$

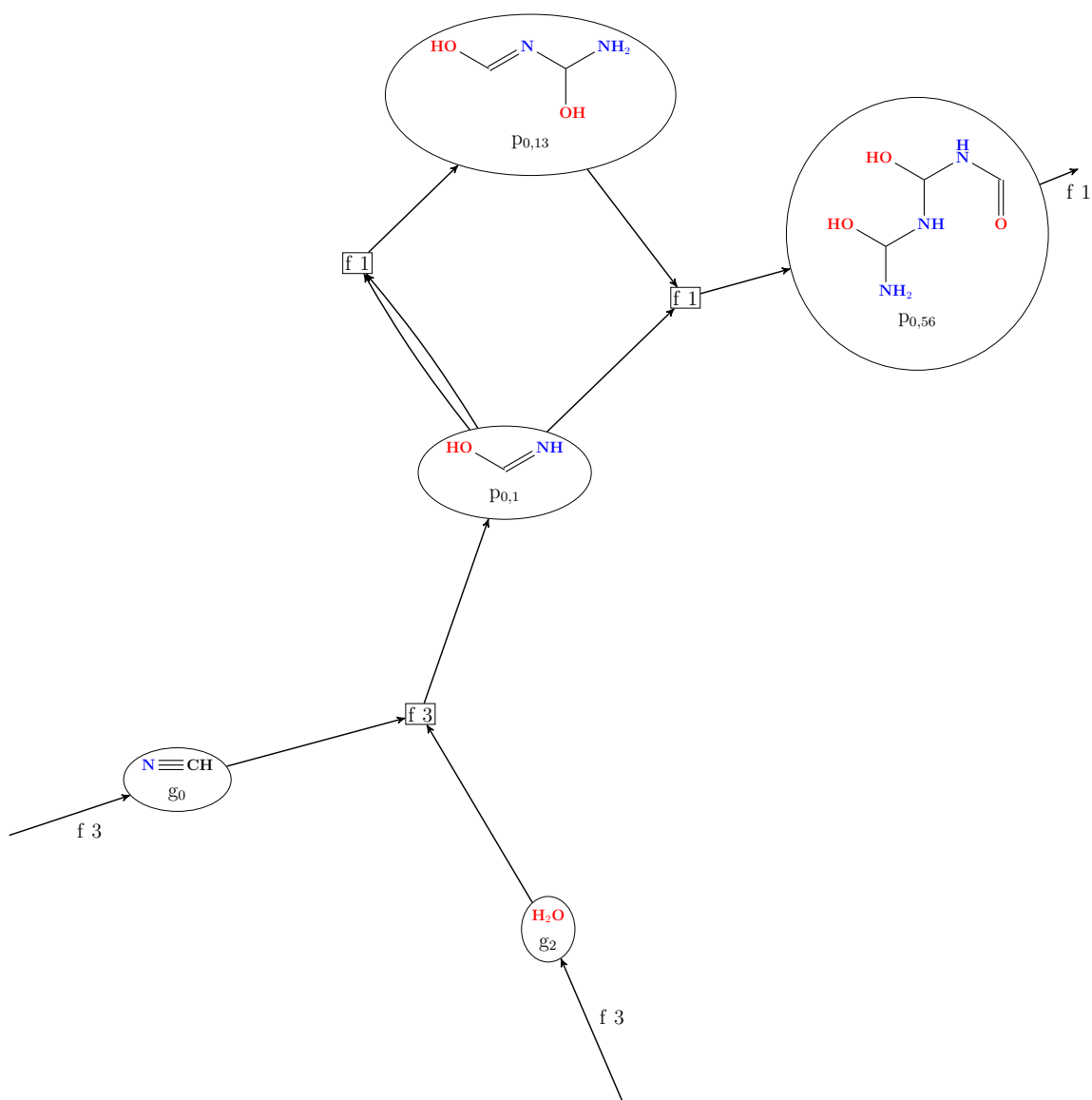
### 0.3.6 Solution 5

#### Overall Data

Objective value (non-integral): -0.0898242

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	-21.240635	1.000000	65
$p_{\{0,1\}}$	0	0	-10.610080	1.000000	1
$p_{\{0,56\}}$	0	1	-31.869324	-6.000000	67

## Filtered Graph



File: out/078\_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	1.0	-13302.819176	0
$p_{0,1}$	0	0	-27856.761341	1.0	-27853.435556	1
$p_{0,13}$	0	0	-55767.279594	1.0	-55763.953809	65
$p_{0,56}$	0	1	-83672.898792	-6.0	-83692.853502	67

Hyperedge	Source	Target	Flow	$x_e^{\Delta G}$	$\bar{x}_e^{\Delta G}$
6	$g_0, g_2,$	$p_{0,1},$	3	-95.748033	-95.748033
30	$p_{0,1}, p_{0,1},$	$p_{0,13},$	1	-57.914144	-57.914144
263	$p_{0,1}, p_{0,13},$	$p_{0,56},$	1	-82.115707	-82.115707
Sum					-235.83341486452508

$$\Delta G = -42.72739426039572$$

$$\Delta E = -0.08982420386514837$$

$$|E| = 5$$

$$|U| = 3$$

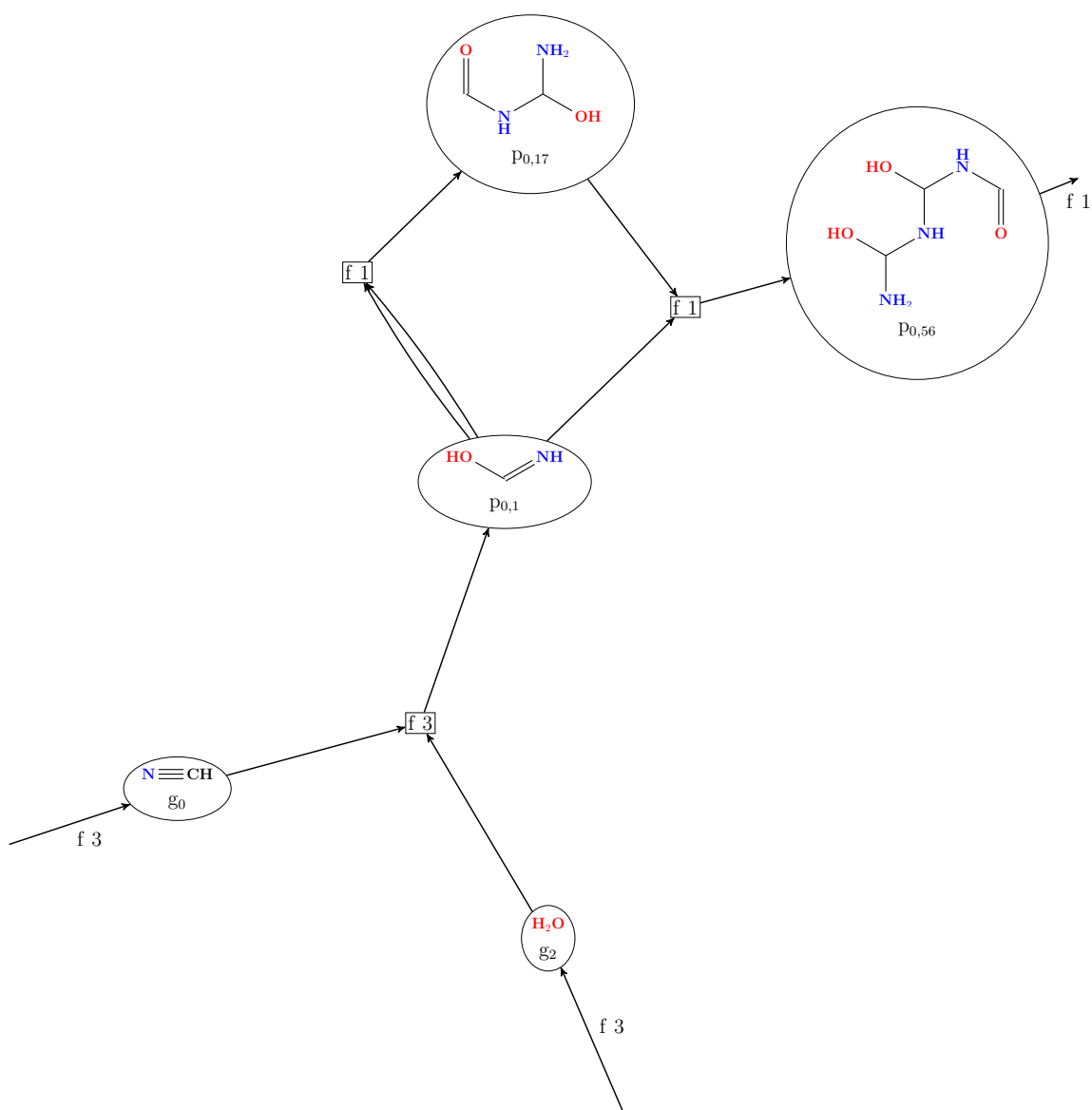
### 0.3.7 Solution 6

#### Overall Data

Objective value (non-integral): -0.0898242

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
$p_{\{0,17\}}$	0	0	-21.248844	1.000000	45
$p_{\{0,1\}}$	0	0	-10.610080	1.000000	21
$p_{\{0,56\}}$	0	1	-31.869324	-6.000000	67

#### Filtered Graph



File: out/087\_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	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	21
$p_{0,17}$	0	0	-55788.832737	1.0	-55785.506952	45
$p_{0,56}$	0	1	-83672.898792	-6.0	-83692.853502	67

Hyperedge	Source	Target	Flow	$x_e^{\Delta G}$	$\bar{x}_e^{\Delta G}$
6	$g_0, g_2,$	$p_{0,1},$	3	-95.748033	-95.748033
40	$p_{0,1}, p_{0,1},$	$p_{0,17},$	1	-79.467287	-79.467287
196	$p_{0,1}, p_{0,17},$	$p_{0,56},$	1	-60.562565	-60.562565
Sum					-235.83341486452508

$$\Delta G = -42.72739426039572$$

$$\Delta E = -0.08982420386514837$$

$$|E| = 5$$

$$|U| = 3$$

### 0.3.8 Solution 7

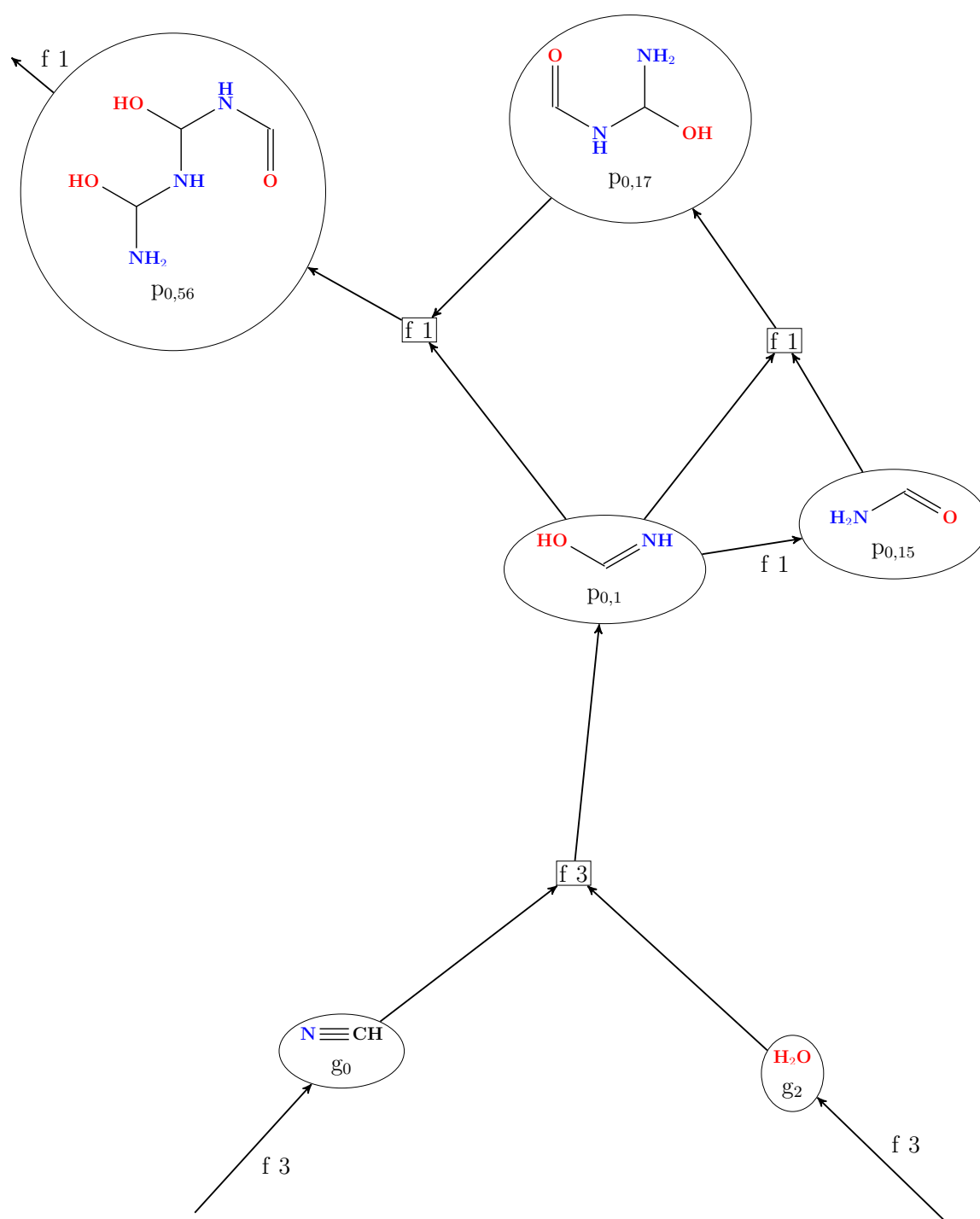
#### Overall Data

Objective value (non-integral): -0.0898242

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
$p_{\{0,15\}}$	0	0	-10.625195	1.000000	2
$p_{\{0,17\}}$	0	0	-21.248844	1.000000	4
$p_{\{0,1\}}$	0	0	-10.610080	1.000000	1
$p_{\{0,56\}}$	0	1	-31.869324	-6.000000	67



## Filtered Graph



File: out/096\_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	-13306.144961	1.0	-13302.819176	0
$p_{0,1}$	0	0	-27856.761341	1.0	-27853.435556	1
$p_{0,15}$	0	0	-27896.445756	1.0	-27893.119971	2
$p_{0,17}$	0	0	-55788.832737	1.0	-55785.506952	4
$p_{0,56}$	0	1	-83672.898792	-6.0	-83692.853502	67

Hyperedge	Source	Target	Flow	$x_e^{\Delta G}$	$\bar{x}_e^{\Delta G}$
6	$g_0, g_2,$	$p_{0,1},$	3	-95.748033	-95.748033
36	$p_{0,1},$	$p_{0,15},$	1	-39.684415	-39.684415
183	$p_{0,1}, p_{0,15},$	$p_{0,17},$	1	-39.782872	-39.782872
196	$p_{0,1}, p_{0,17},$	$p_{0,56},$	1	-60.562565	-60.562565
Sum					-235.8334148645266

$$\Delta G = -42.72739399784575$$

$$\Delta E = -0.08982420386514894$$

$$|E| = 6$$

$$|U| = 4$$

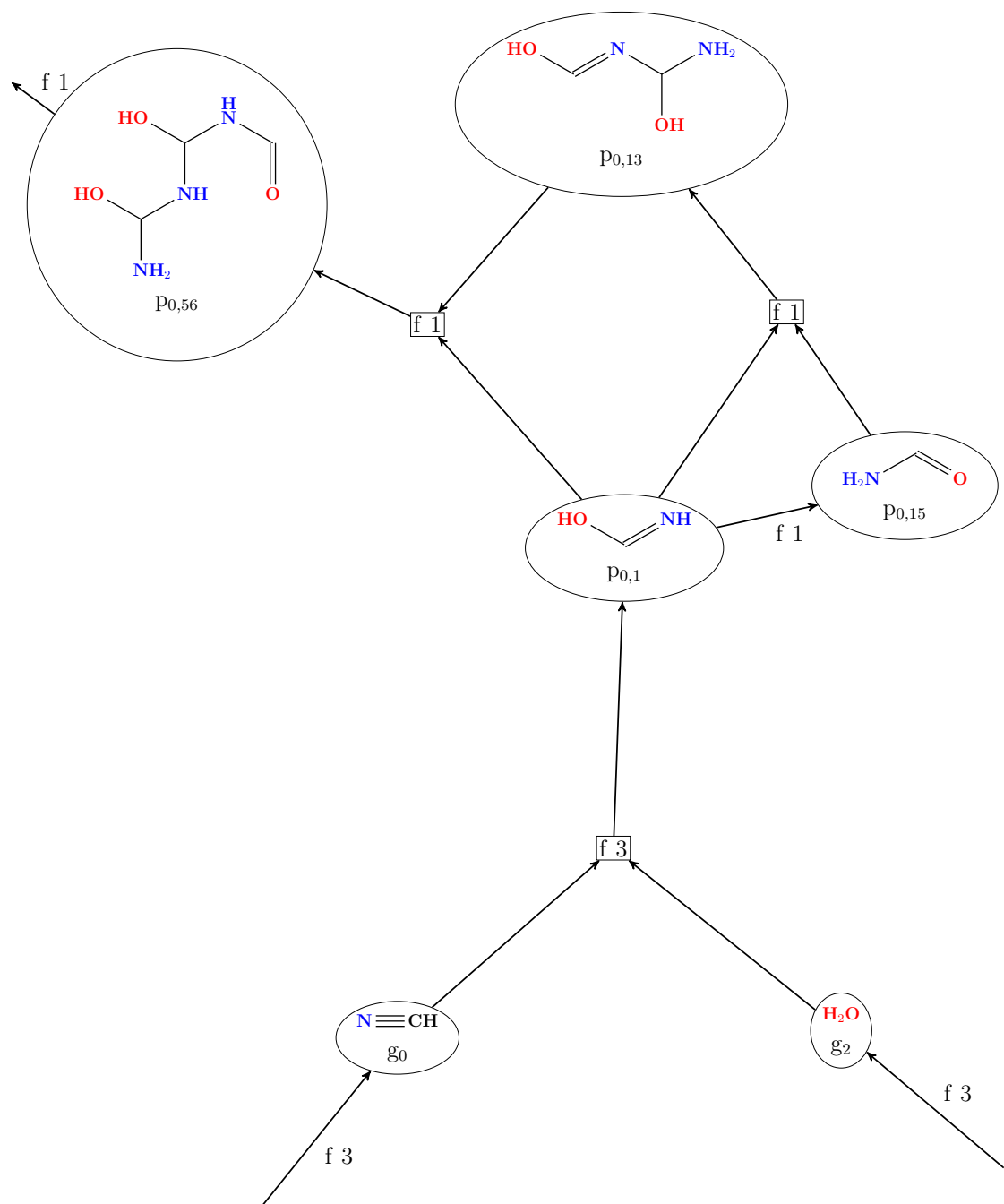
### 0.3.9 Solution 8

#### Overall Data

Objective value (non-integral): -0.0898242

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	-1.600037	45
$p_{\{0,15\}}$	0	0	-10.625195	1.000000	22
$p_{\{0,1\}}$	0	0	-10.610101	-6.000000	1
$p_{\{0,56\}}$	0	1	-31.869260	1.000000	67

Filtered Graph



File: out/105\_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	1.0	-14455.699793	0
$g_2$	3	0	-13306.144961	1.0	-13302.819176	0
$p_{0,1}$	0	0	-27856.817054	-6.0	-27876.771765	1
$p_{0,13}$	0	0	-55767.391129	-1.600037	-55772.712509	45
$p_{0,15}$	0	0	-27896.445756	1.0	-27893.119971	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	-124.904366	-124.904366
36	$p_{0,1},$	$p_{0,15},$	1	-10.528082	-10.528082
192	$p_{0,1}, p_{0,15},$	$p_{0,13},$	1	0.006113	0.006113
263	$p_{0,1}, p_{0,13},$	$p_{0,56},$	1	-12.770919	-12.770919
Sum				-235.8334148645236	

$$\Delta G = -39.800598058388196$$

$$\Delta E = -0.0898242038651478$$

$$|E| = 6$$

$$|U| = 4$$

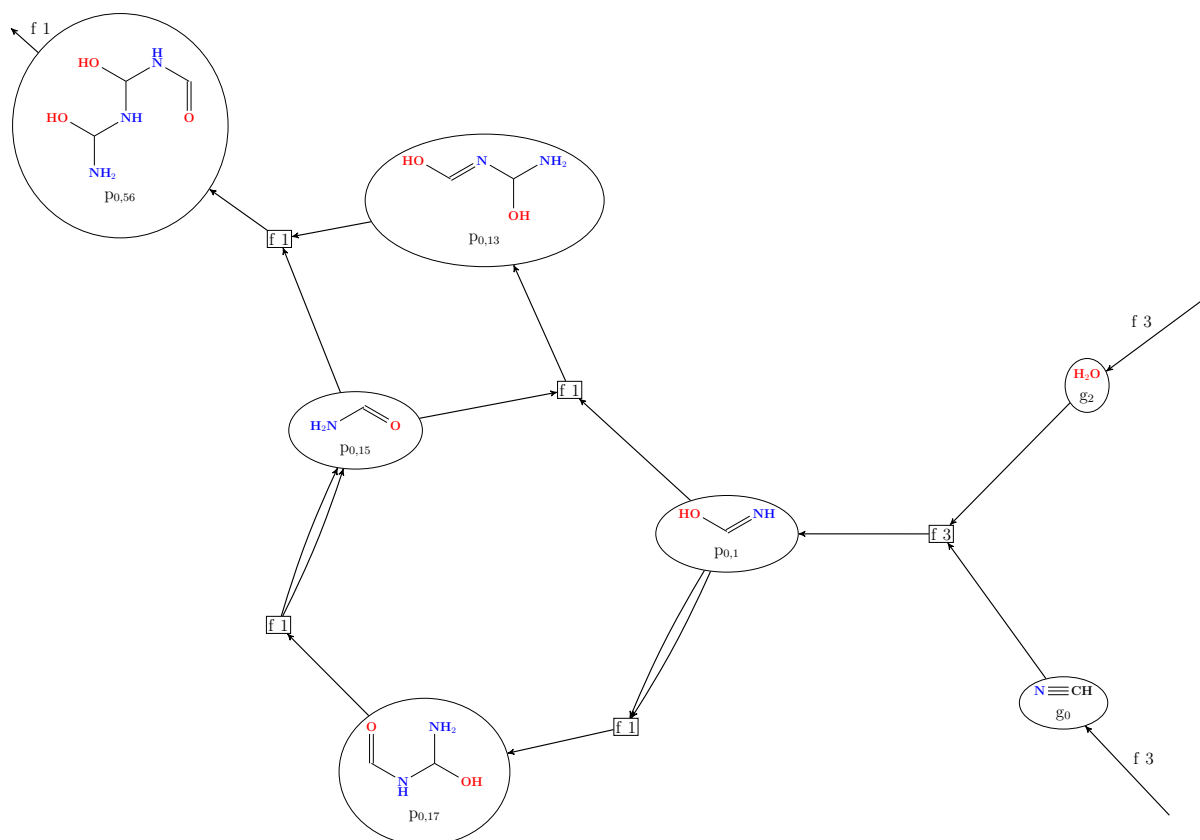
### 0.3.10 Solution 9

#### Overall Data

Objective value (non-integral): -0.0898242

Vertex/Graph	In	Out	G	logK	t_order
$g_{\{0\}}$	3	0	-5.507152	1.000000	0
$g_{\{2\}}$	3	0	-5.068043	-6.000000	0
$p_{\{0,13\}}$	0	0	-21.240678	-2.194685	40
$p_{\{0,15\}}$	0	0	-10.625174	-6.000000	26
$p_{\{0,17\}}$	0	0	-21.248887	1.000000	25
$p_{\{0,1\}}$	0	0	-10.610101	1.000000	12
$p_{\{0,56\}}$	0	1	-31.869324	-6.000000	67

#### Filtered Graph



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	-6.0	-13326.099672	0
$p_{0,1}$	0	0	-27856.817054	1.0	-27853.491269	12
$p_{0,13}$	0	0	-55767.391129	-2.194685	-55774.690179	40
$p_{0,15}$	0	0	-27896.389963	-6.0	-27916.344673	26
$p_{0,17}$	0	0	-55788.944315	1.0	-55785.61853	25
$p_{0,56}$	0	1	-83672.898792	-6.0	-83692.853502	67

Hyperedge	Source	Target	Flow	$x_e^{\Delta G}$	$\bar{x}_e^{\Delta G}$
6	$g_0, g_2,$	$p_{0,1},$	3	-66.703128	-66.703128
40	$p_{0,1}, p_{0,1},$	$p_{0,17},$	1	-79.467437	-79.467437
169	$p_{0,13}, p_{0,15},$	$p_{0,56},$	1	0.006113	0.006113
192	$p_{0,1}, p_{0,15},$	$p_{0,13},$	1	-2.521768	-2.521768
237	$p_{0,17},$	$p_{0,15}, p_{0,15},$	1	-57.879618	-57.879618
Sum					-235.8334148645236

$$\Delta G = -33.99720862062955$$

$$\Delta E = -0.0898242038651478$$

$$|E| = 7$$

$$|U| = 5$$

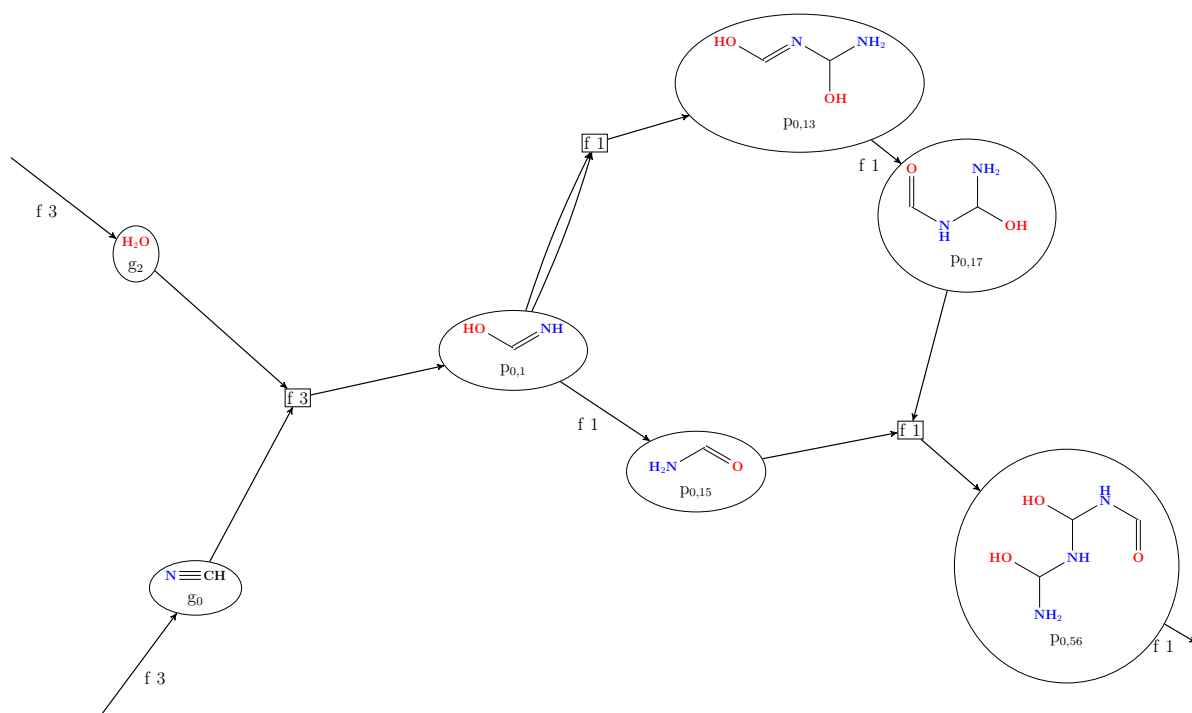
### 0.3.11 Solution 10

#### Overall Data

Objective value (non-integral): -0.0898242

Vertex/Graph	In	Out	G	logK	t_order
$g_{\{0\}}$	3	0	-5.507152	1.000000	0
$g_{\{2\}}$	3	0	-5.068043	-6.000000	19
$p_{\{0,13\}}$	0	0	-21.240635	1.000000	44
$p_{\{0,15\}}$	0	0	-10.625174	1.000000	21
$p_{\{0,17\}}$	0	0	-21.248844	1.000000	45
$p_{\{0,1\}}$	0	0	-10.610101	1.000000	20
$p_{\{0,56\}}$	0	1	-31.869324	-6.000000	67

## Filtered Graph



File: out/123\_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	-6.0	-13326.099672	19
$p_{0,1}$	0	0	-27856.817054	1.0	-27853.491269	20
$p_{0,13}$	0	0	-55767.279594	1.0	-55763.953809	44
$p_{0,15}$	0	0	-27896.389963	1.0	-27893.064178	21
$p_{0,17}$	0	0	-55788.832737	1.0	-55785.506952	45
$p_{0,56}$	0	1	-83672.898792	-6.0	-83692.853502	67

Hyperedge	Source	Target	Flow	$x_e^{\Delta G}$	$\bar{x}_e^{\Delta G}$
6	$g_0, g_2$	$p_{0,1}$	3	-66.703128	-66.703128
30	$p_{0,1}, p_{0,1}$	$p_{0,13}$	1	-57.802717	-57.802717
36	$p_{0,1}$	$p_{0,15}$	1	-39.572909	-39.572909
181	$p_{0,15}, p_{0,17}$	$p_{0,56}$	1	-20.933942	-20.933942
250	$p_{0,13}$	$p_{0,17}$	1	-21.553143	-21.553143
Sum					-235.8334148645234

$$\Delta G = -33.99720835807959$$

$$\Delta E = -0.08982420386514774$$

$$|E| = 7$$

$$|U| = 5$$

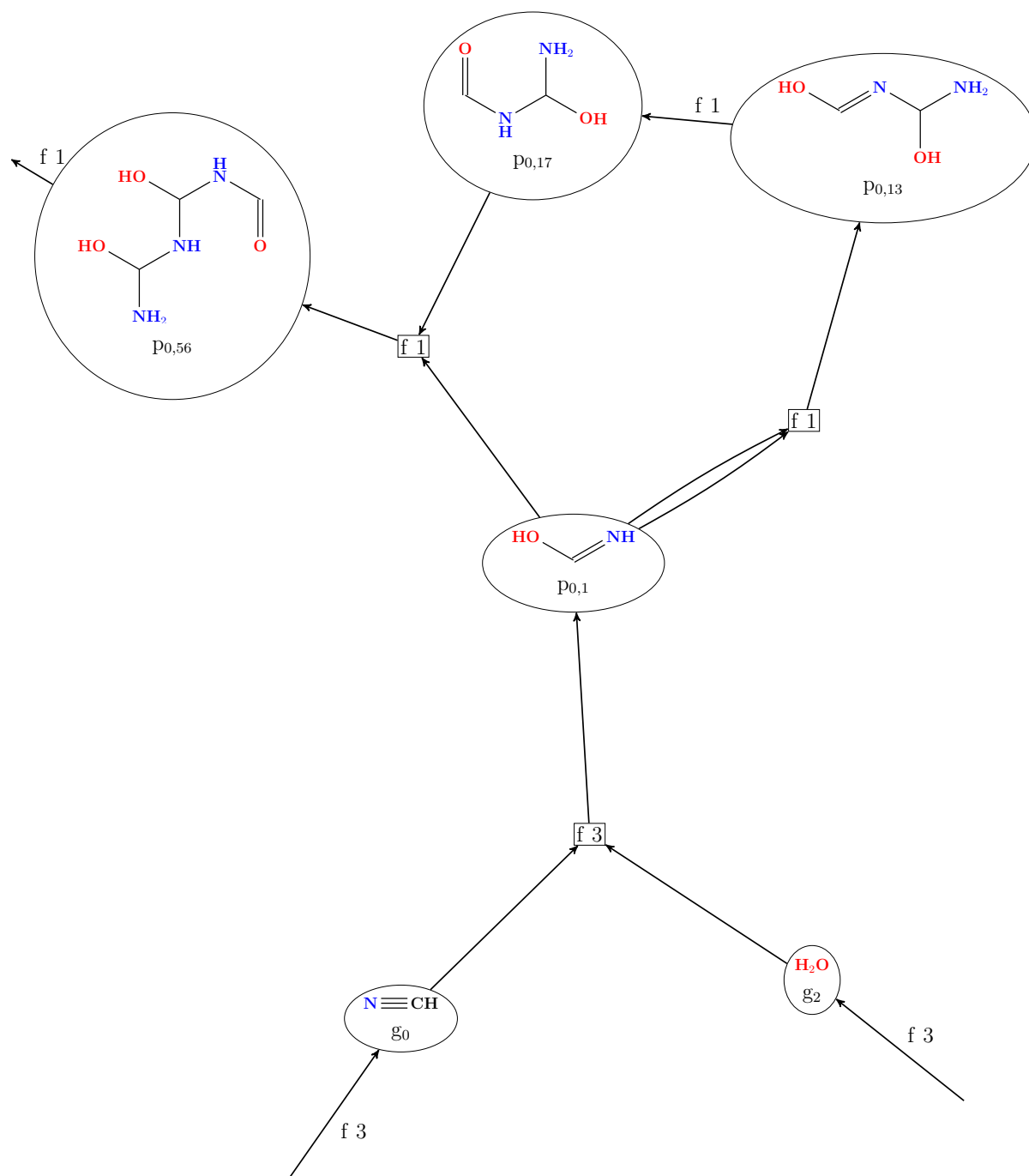
### 0.3.12 Solution 11

#### Overall Data

Objective value (non-integral): -0.0898242

Vertex/Graph	In	Out	G	logK	t_order
g_{0}	3	0	-5.507152	1.000000	0
g_{2}	3	0	-5.068043	-6.000000	20
p_{0,13}	0	0	-21.240635	1.000000	43
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	-6.000000	67

## Filtered Graph



File: out/132\_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	-13306.144961	-6.0	-13326.099672	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
$p_{0,17}$	0	0	-55788.832737	1.0	-55785.506952	45
$p_{0,56}$	0	1	-83672.898792	-6.0	-83692.853502	67

Hyperedge	Source	Target	Flow	$x_e^{\Delta G}$	$\bar{x}_e^{\Delta G}$
6	$g_0, g_2,$	$p_{0,1},$	3	-66.647414	-66.647414
30	$p_{0,1}, p_{0,1},$	$p_{0,13},$	1	-57.914144	-57.914144
196	$p_{0,1}, p_{0,17},$	$p_{0,56},$	1	-60.562565	-60.562565
250	$p_{0,13},$	$p_{0,17},$	1	-21.553143	-21.553143
Sum					-235.83341486452193

$$\Delta G = -33.99720862062955$$

$$\Delta E = -0.08982420386514717$$

$$|E| = 6$$

$$|U| = 4$$

### 0.3.13 Solution 12

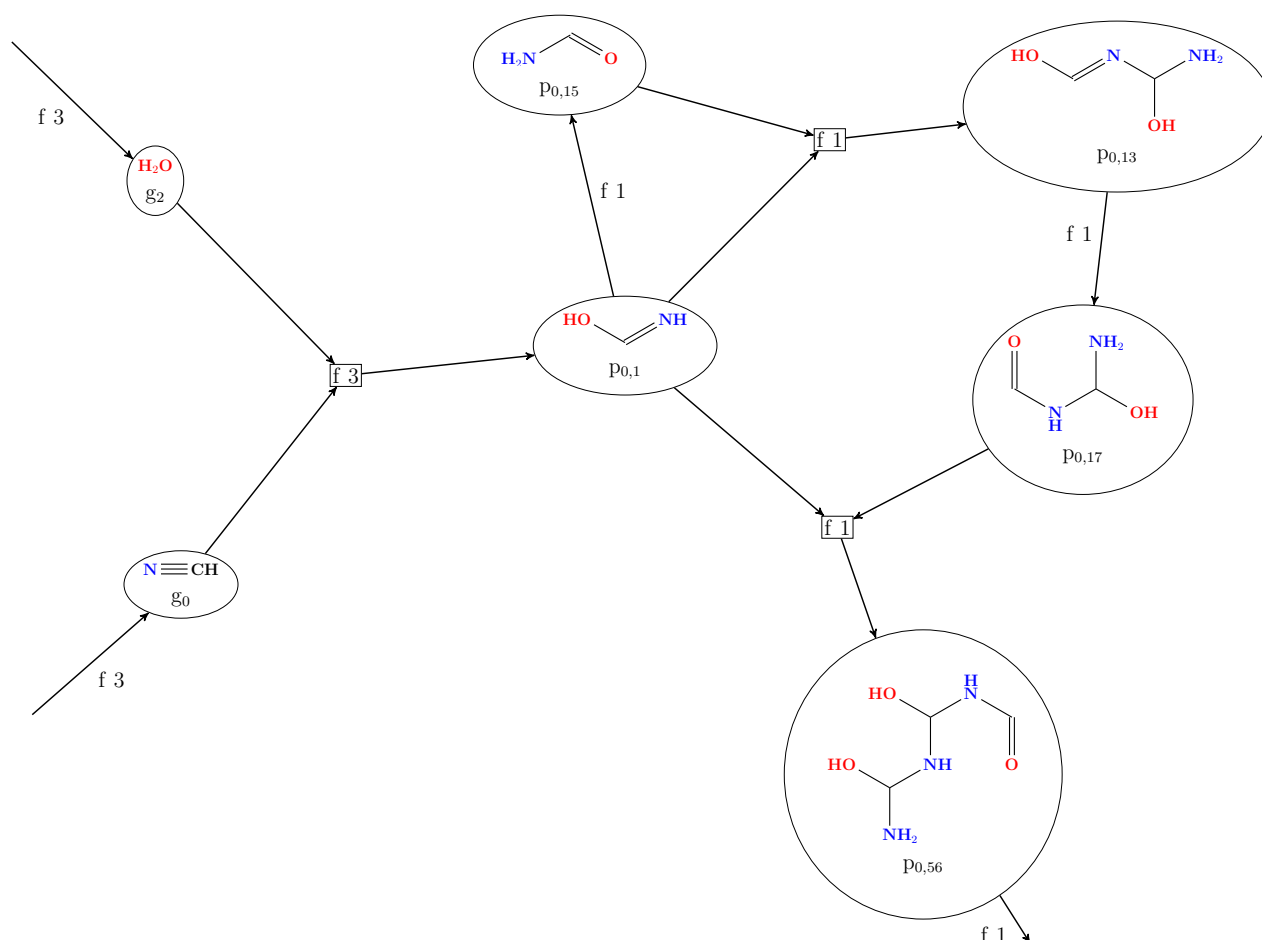
#### Overall Data

Objective value (non-integral): -0.0898242

Vertex/Graph	In	Out	G	logK	t_order
$g_{\{0\}}$	3	0	-5.507152	-6.000000	0
$g_{\{2\}}$	3	0	-5.068043	-6.000000	20
$p_{\{0,13\}}$	0	0	-21.240635	1.000000	44
$p_{\{0,15\}}$	0	0	-10.625195	-3.386535	22
$p_{\{0,17\}}$	0	0	-21.248844	1.000000	45
$p_{\{0,1\}}$	0	0	-10.610080	1.000000	21
$p_{\{0,56\}}$	0	1	-31.869324	-6.000000	67



## Filtered Graph



File: out/141\_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	-6.0	-14478.980288	0
$g_2$	3	0	-13306.144961	-6.0	-13326.099672	20
$p_{0,1}$	0	0	-27856.761341	1.0	-27853.435556	21
$p_{0,13}$	0	0	-55767.279594	1.0	-55763.953809	44
$p_{0,15}$	0	0	-27896.445756	-3.386535	-27907.708644	22
$p_{0,17}$	0	0	-55788.832737	1.0	-55785.506952	45
$p_{0,56}$	0	1	-83672.898792	-6.0	-83692.853502	67

Hyperedge	Source	Target	Flow	$x_e^{\Delta G}$	$\bar{x}_e^{\Delta G}$
6	$g_0, g_2$	$p_{0,1}$	3	-37.546795	-37.546795
36	$p_{0,1}$	$p_{0,15}$	1	-57.920257	-57.920257
192	$p_{0,1}, p_{0,15}$	$p_{0,13}$	1	0.006113	0.006113
196	$p_{0,1}, p_{0,17}$	$p_{0,56}$	1	-60.562565	-60.562565
250	$p_{0,13}$	$p_{0,17}$	1	-21.553143	-21.553143
Sum				-235.83341486452042	

$$\Delta G = -25.26702245576346$$

$$\Delta E = -0.0898242038651466$$

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

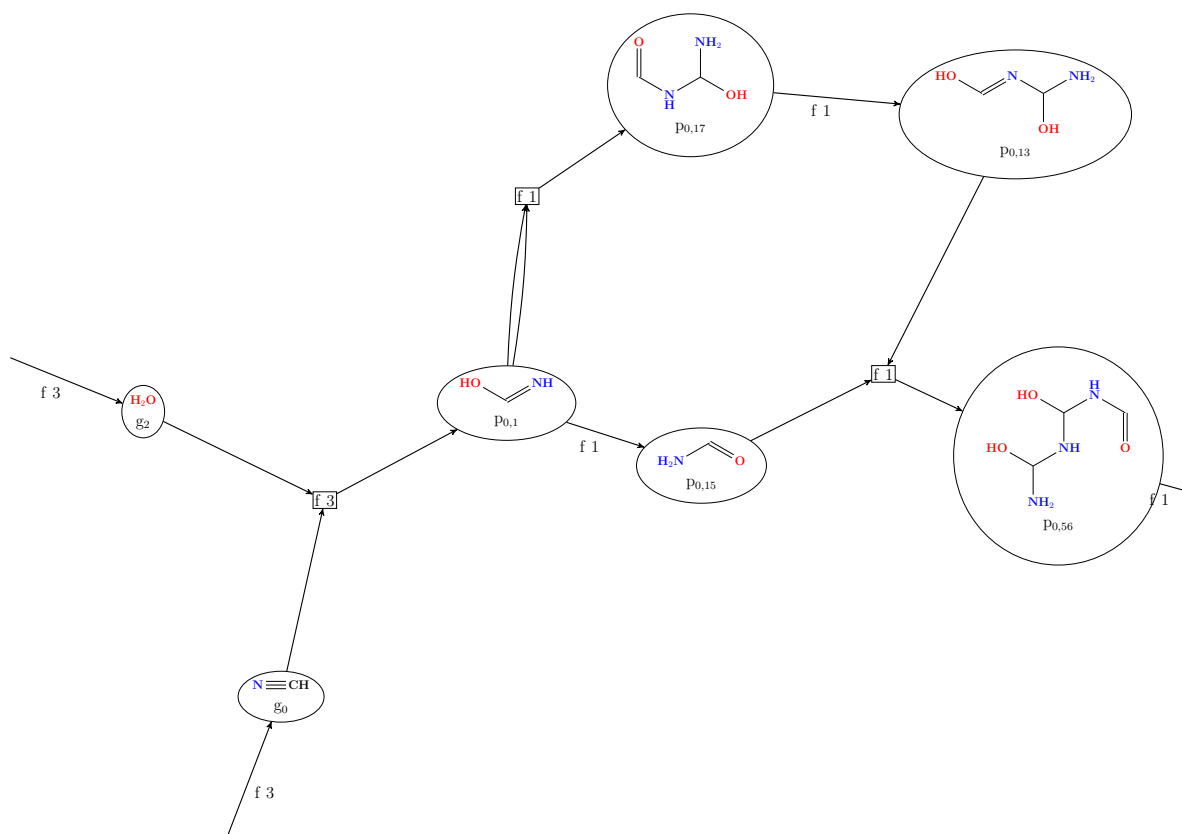
### 0.3.14 Solution 13

#### Overall Data

Objective value (non-integral): -0.0898242

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	-4.183034	8
$p_{\{0,15\}}$	0	0	-10.625174	-4.011651	31
$p_{\{0,17\}}$	0	0	-21.248887	1.000000	7
$p_{\{0,1\}}$	0	0	-10.610101	1.000000	3
$p_{\{0,56\}}$	0	1	-31.869324	-6.000000	67

#### Filtered Graph



File: out/150\_dg\_0\_11100\_f\_0\_13\_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	3
$p_{0,13}$	0	0	-55767.391129	-4.183034	-55781.303002	8
$p_{0,15}$	0	0	-27896.389963	-4.011651	-27909.73185	31
$p_{0,17}$	0	0	-55788.944315	1.0	-55785.61853	7
$p_{0,56}$	0	1	-83672.898792	-6.0	-83692.853502	67

Hyperedge	Source	Target	Flow	$x_e^{\Delta G}$	$\bar{x}_e^{\Delta G}$
6	$g_0, g_2,$	$p_{0,1},$	3	-95.803747	-95.803747
36	$p_{0,1},$	$p_{0,15},$	1	-60.407499	-60.407499
40	$p_{0,1}, p_{0,1},$	$p_{0,17},$	1	-79.467437	-79.467437
169	$p_{0,13}, p_{0,15},$	$p_{0,56},$	1	0.006113	0.006113
253	$p_{0,17},$	$p_{0,13},$	1	0.006113	0.006113
Sum					-235.8334148645204

$$\Delta G = -42.727395048045615$$

$$\Delta E = -0.08982420386514658$$

$$|E| = 7$$

$$|U| = 5$$

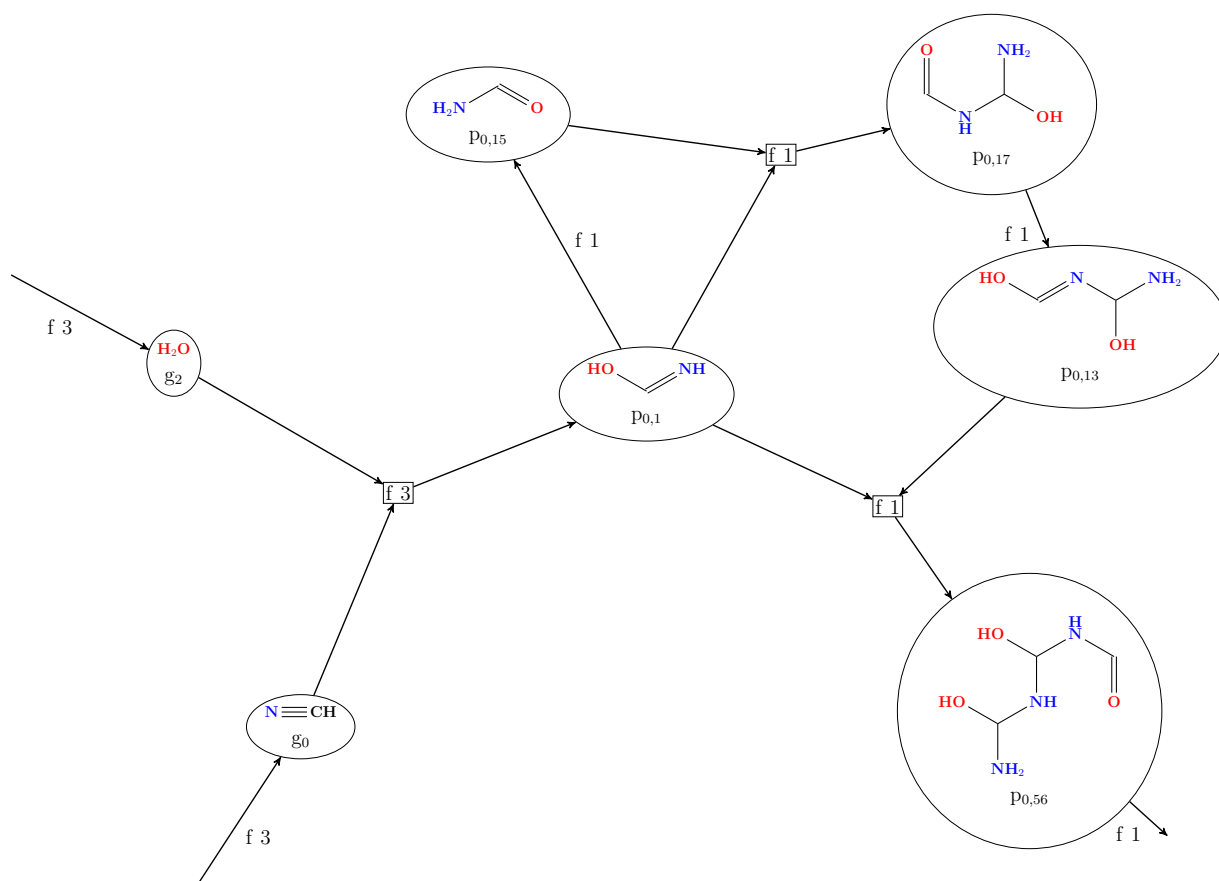
### 0.3.15 Solution 14

#### Overall Data

Objective value (non-integral): -0.0898242

Vertex/Graph	In	Out	G	logK	t_order
$g_{\{0\}}$	3	0	-5.507152	1.000000	0
$g_{\{2\}}$	3	0	-5.068043	-6.000000	0
$p_{\{0,13\}}$	0	0	-21.240678	-6.000000	65
$p_{\{0,15\}}$	0	0	-10.625195	-6.000000	2
$p_{\{0,17\}}$	0	0	-21.248844	1.000000	64
$p_{\{0,1\}}$	0	0	-10.610080	-1.571030	1
$p_{\{0,56\}}$	0	1	-31.869324	-6.000000	67

## Filtered Graph



File: out/159\_dg\_0\_11100\_f\_0\_14\_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	-6.0	-13326.099672	0
$p_{0,1}$	0	0	-27856.761341	-1.57103	-27861.986248	1
$p_{0,13}$	0	0	-55767.391129	-6.0	-55787.345839	65
$p_{0,15}$	0	0	-27896.445756	-6.0	-27916.400466	2
$p_{0,17}$	0	0	-55788.832737	1.0	-55785.506952	64
$p_{0,56}$	0	1	-83672.898792	-6.0	-83692.853502	67

Hyperedge	Source	Target	Flow	$x_e^{\Delta G}$	$\bar{x}_e^{\Delta G}$
6	$g_0, g_2$	$p_{0,1}$	3	-77.33578	-77.33578
36	$p_{0,1}$	$p_{0,15}$	1	-58.096668	-58.096668
183	$p_{0,1}, p_{0,15}$	$p_{0,17}$	1	0.006113	0.006113
253	$p_{0,17}$	$p_{0,13}$	1	-7.659011	-7.659011
263	$p_{0,1}, p_{0,13}$	$p_{0,56}$	1	-42.215188	-42.215188
Sum					-235.83341486452971

$$\Delta G = -33.99720835807959$$

$$\Delta E = -0.08982420386515014$$

$$|E| = 7$$

$$|U| = 5$$

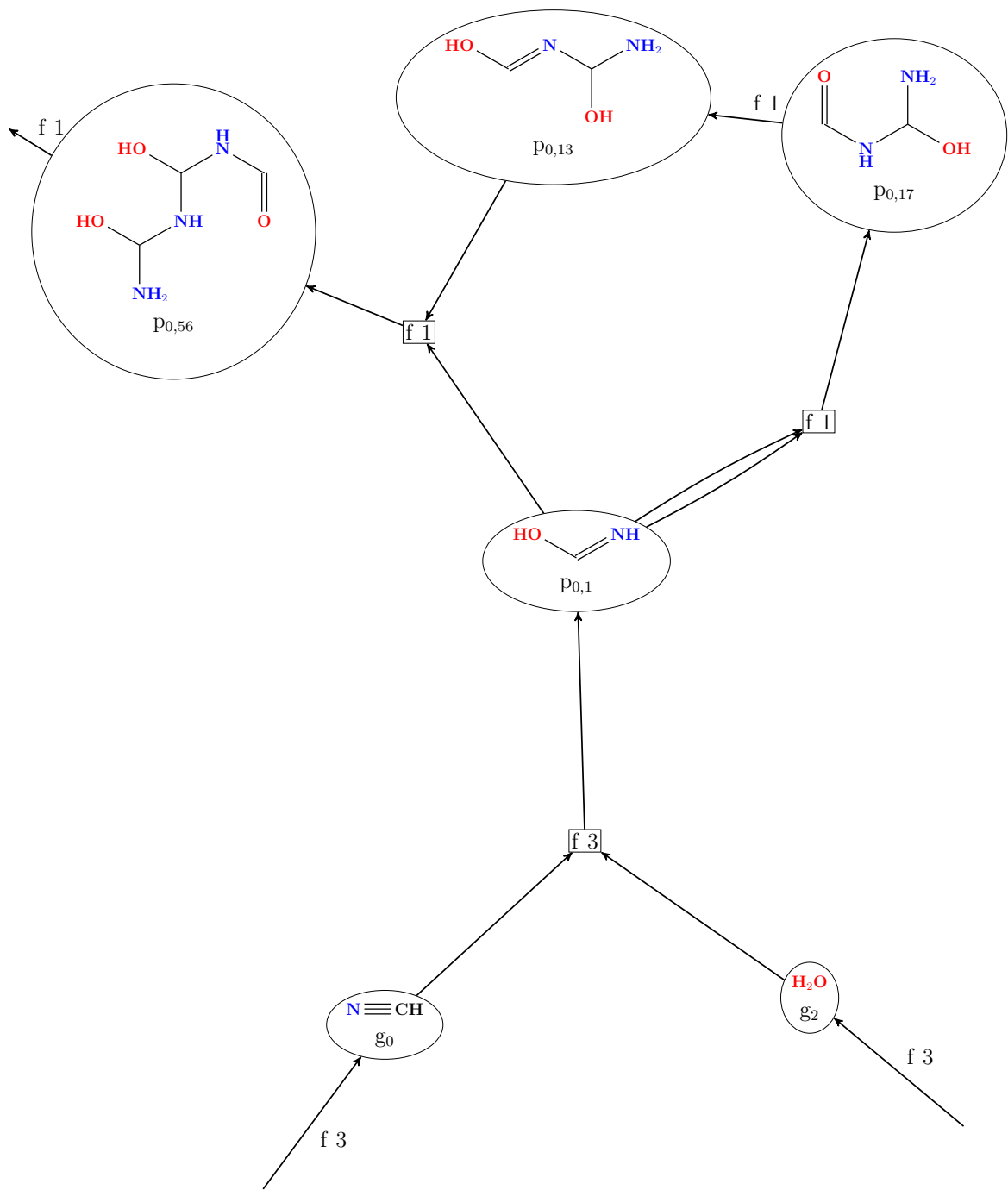
### 0.3.16 Solution 15

#### Overall Data

Objective value (non-integral): -0.0898242

Vertex/Graph	In	Out	G	logK	t_order
$g_{\{0\}}$	3	0	-5.507152	-6.000000	0
$g_{\{2\}}$	3	0	-5.068043	-6.000000	0
$p_{\{0,13\}}$	0	0	-21.240678	-6.000000	65
$p_{\{0,17\}}$	0	0	-21.248844	1.000000	3
$p_{\{0,1\}}$	0	0	-10.610080	1.000000	1
$p_{\{0,56\}}$	0	1	-31.869324	-6.000000	67

Filtered Graph



File: out/168\_dg\_0\_11100\_f\_0\_15\_filt

Vertex	InFlow	OutFlow	$x_v^{\Delta G^0}$	$x_v^K$	$x_v^{\Delta G}$	$t_v$
$g_0$	3	0	-14459.025578	-6.0	-14478.980288	0
$g_2$	3	0	-13306.144961	-6.0	-13326.099672	0
$p_{0,1}$	0	0	-27856.761341	1.0	-27853.435556	1
$p_{0,13}$	0	0	-55767.391129	-6.0	-55787.345839	65
$p_{0,17}$	0	0	-55788.832737	1.0	-55785.506952	3
$p_{0,56}$	0	1	-83672.898792	-6.0	-83692.853502	67

Hyperedge	Source	Target	Flow	$x_e^{\Delta G}$	$\bar{x}_e^{\Delta G}$
6	$g_0, g_2,$	$p_{0,1},$	3	-37.546795	-37.546795
40	$p_{0,1}, p_{0,1},$	$p_{0,17},$	1	-79.467287	-79.467287
253	$p_{0,17},$	$p_{0,13},$	1	-7.659011	-7.659011
263	$p_{0,1}, p_{0,13},$	$p_{0,56},$	1	-52.903554	-52.903554
Sum					-235.83341486452827

$$\Delta G = -25.267022718313424$$

$$\Delta E = -0.08982420386514958$$

$$|E| = 6$$

$$|U| = 4$$

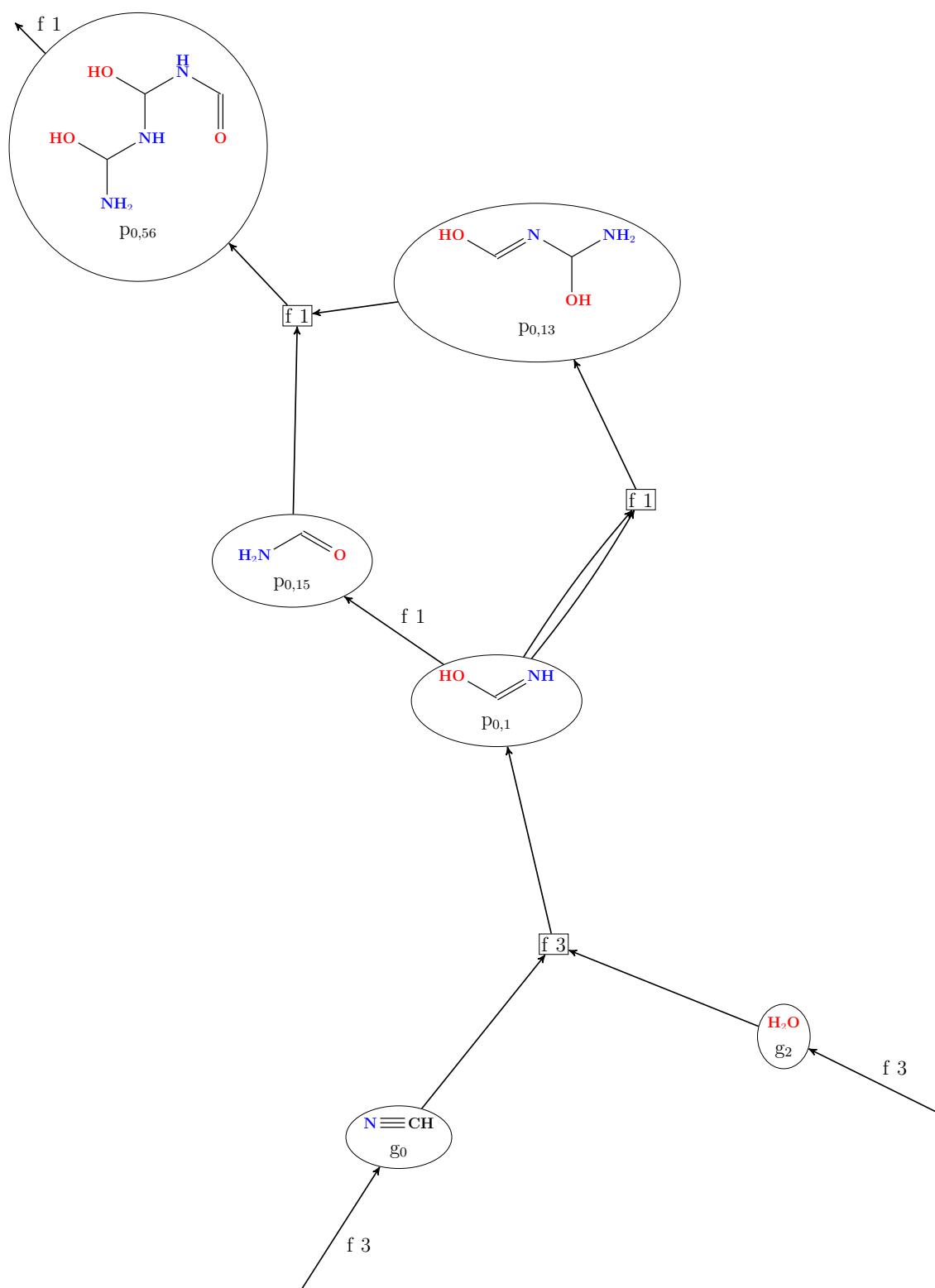
### 0.3.17 Solution 16

#### Overall Data

Objective value (non-integral): -0.0898242

Vertex/Graph	In	Out	G	logK	t_order
$g_{\{0\}}$	3	0	-5.507152	1.000000	0
$g_{\{2\}}$	3	0	-5.068043	-6.000000	0
$p_{\{0,13\}}$	0	0	-21.240678	-2.181264	64
$p_{\{0,15\}}$	0	0	-10.625195	-6.000000	2
$p_{\{0,1\}}$	0	0	-10.610101	1.000000	1
$p_{\{0,56\}}$	0	1	-31.869324	-6.000000	67

## Filtered Graph



File: out/177\_dg\_0\_11100\_f\_0\_16\_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	-6.0	-13326.099672	0
$p_{0,1}$	0	0	-27856.817054	1.0	-27853.491269	1
$p_{0,13}$	0	0	-55767.391129	-2.181264	-55774.645545	64
$p_{0,15}$	0	0	-27896.445756	-6.0	-27916.400466	2
$p_{0,56}$	0	1	-83672.898792	-6.0	-83692.853502	67

Hyperedge	Source	Target	Flow	$x_e^{\Delta G}$	$\bar{x}_e^{\Delta G}$
6	$g_0, g_2,$	$p_{0,1},$	3	-66.703128	-66.703128
30	$p_{0,1}, p_{0,1},$	$p_{0,13},$	1	-71.139503	-71.139503
36	$p_{0,1},$	$p_{0,15},$	1	-68.729321	-68.729321
169	$p_{0,13}, p_{0,15},$	$p_{0,56},$	1	0.006113	0.006113
Sum					-235.83341486451724

$$\Delta G = -33.99720862062955$$

$$\Delta E = -0.08982420386514539$$

$$|E| = 6$$

$$|U| = 4$$

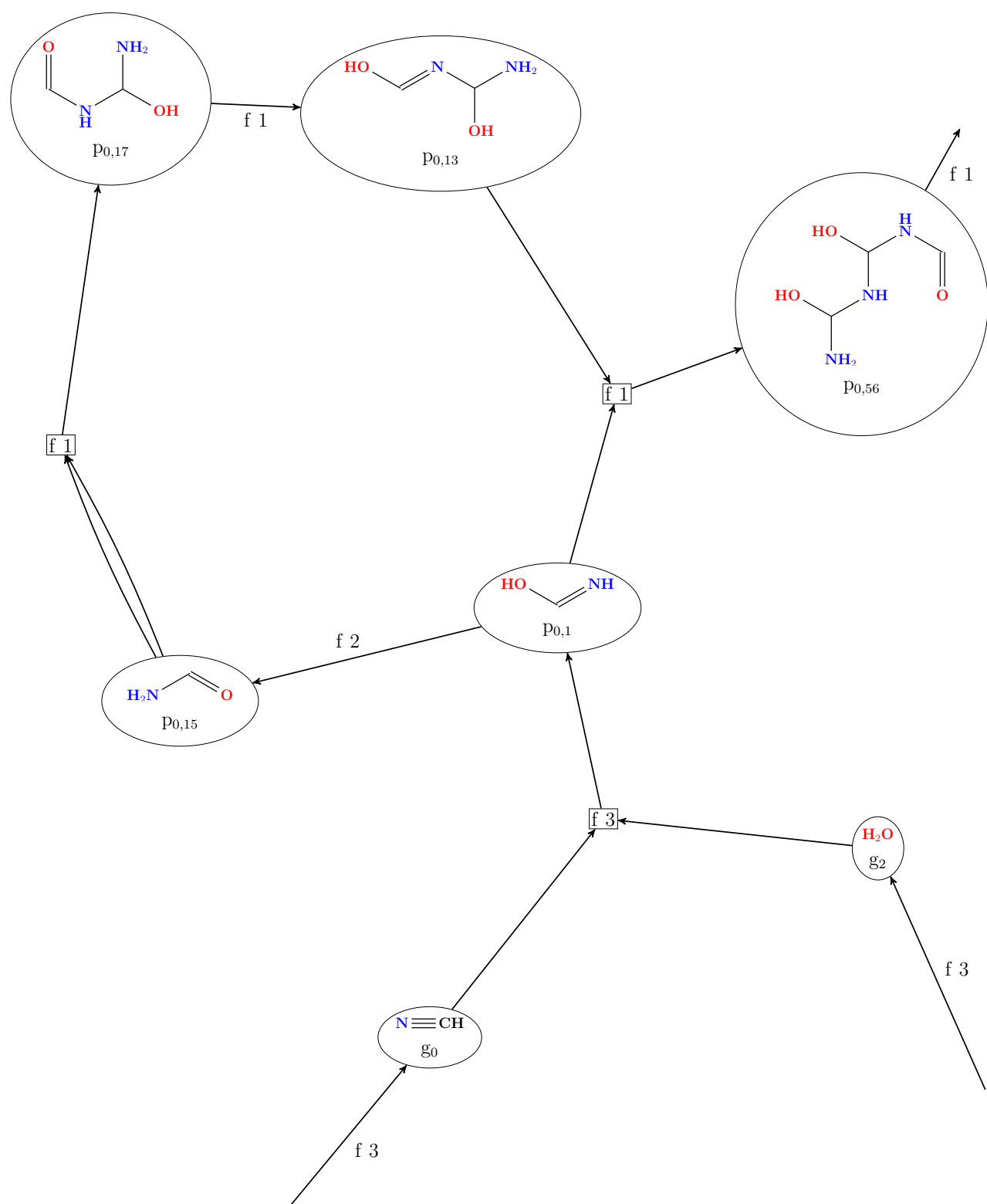
### 0.3.18 Solution 17

#### Overall Data

Objective value (non-integral): -0.0747305

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	-4.183034	65
$p_{\{0,15\}}$	0	0	-10.625174	0.960583	22
$p_{\{0,17\}}$	0	0	-21.248887	1.000000	45
$p_{\{0,1\}}$	0	0	-10.610101	-6.000000	1
$p_{\{0,56\}}$	0	1	-31.869324	-6.000000	67

## Filtered Graph



File: out/186\_dg\_0\_11100\_f\_0\_17\_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	-6.0	-27876.771765	1
$p_{0,13}$	0	0	-55767.391129	-4.183034	-55781.303002	65
$p_{0,15}$	0	0	-27896.389963	0.960583	-27893.195271	22
$p_{0,17}$	0	0	-55788.944315	1.0	-55785.61853	45
$p_{0,56}$	0	1	-83672.898792	-6.0	-83692.853502	67

Hyperedge	Source	Target	Flow	$x_e^{\Delta G}$	$\bar{x}_e^{\Delta G}$
6	$g_0, g_2,$	$p_{0,1},$	3	-124.904366	-124.904366
36	$p_{0,1},$	$p_{0,15},$	2	-10.636156	-10.636156
180	$p_{0,15}, p_{0,15},$	$p_{0,17},$	1	0.006113	0.006113
253	$p_{0,17},$	$p_{0,13},$	1	0.006113	0.006113
263	$p_{0,1}, p_{0,13},$	$p_{0,56},$	1	-31.300767	-31.300767
Sum					-196.2047927607346

$$\Delta G = -42.72739426039572$$

$$\Delta E = -0.07473045884690901$$

$$|E| = 8$$

$$|U| = 5$$

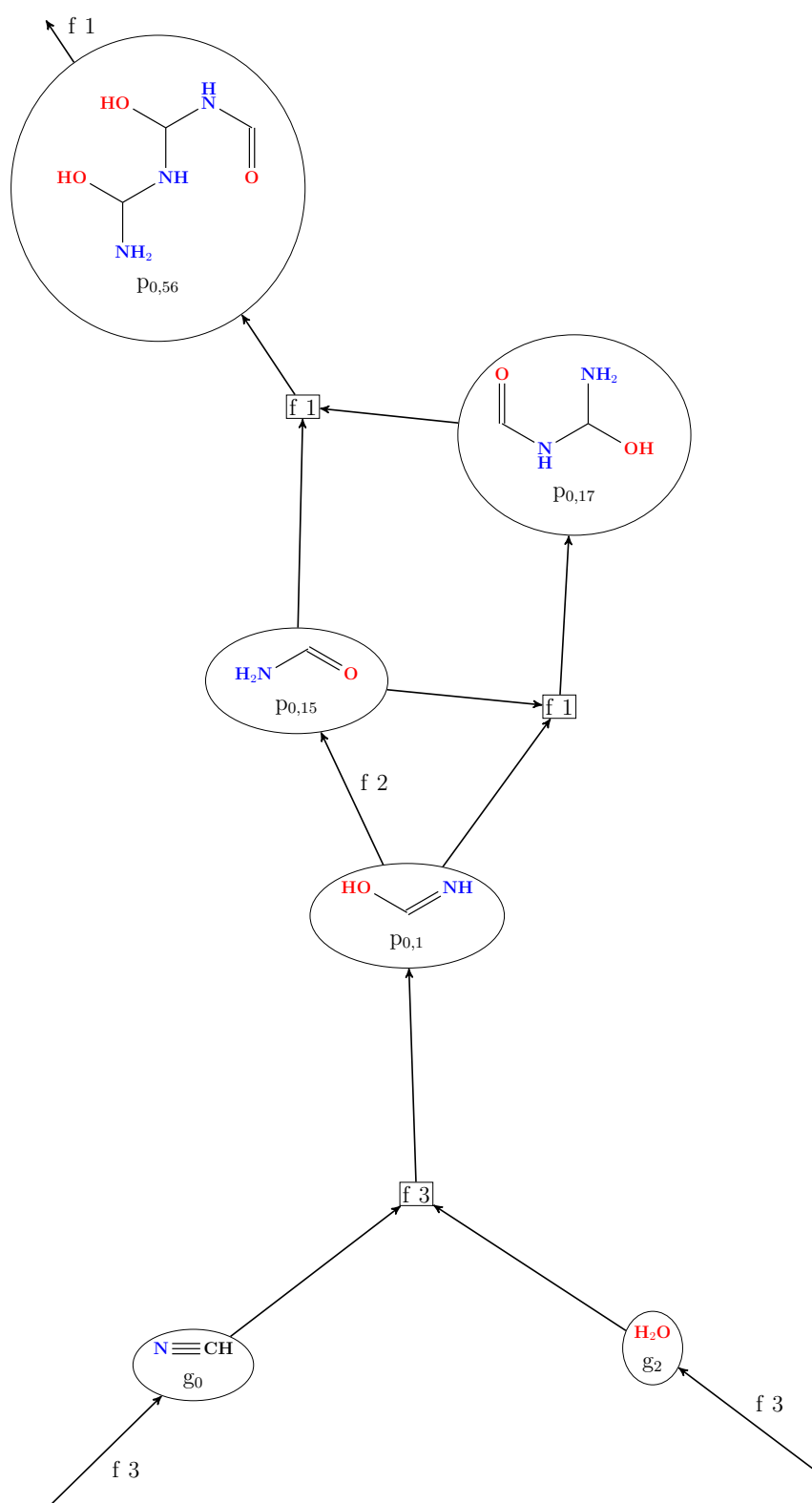
### 0.3.19 Solution 18

#### Overall Data

Objective value (non-integral): -0.0747305

Vertex/Graph	In	Out	G	logK	t_order
$g_{\{0\}}$	3	0	-5.507152	1.000000	0
$g_{\{2\}}$	3	0	-5.068043	-6.000000	0
$p_{\{0,15\}}$	0	0	-10.625195	1.000000	21
$p_{\{0,17\}}$	0	0	-21.248887	1.000000	42
$p_{\{0,1\}}$	0	0	-10.610101	1.000000	20
$p_{\{0,56\}}$	0	1	-31.869324	-6.000000	67

## Filtered Graph



File: out/195\_dg\_0\_11100\_f\_0\_18\_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	-6.0	-13326.099672	0
$p_{0,1}$	0	0	-27856.817054	1.0	-27853.491269	20
$p_{0,15}$	0	0	-27896.445756	1.0	-27893.119971	21
$p_{0,17}$	0	0	-55788.944315	1.0	-55785.61853	42
$p_{0,56}$	0	1	-83672.898792	-6.0	-83692.853502	67

Hyperedge	Source	Target	Flow	$x_e^{\Delta G}$	$\bar{x}_e^{\Delta G}$
6	$g_0, g_2,$	$p_{0,1},$	3	-66.703128	-66.703128
36	$p_{0,1},$	$p_{0,15},$	2	-39.628701	-39.628701
181	$p_{0,15}, p_{0,17},$	$p_{0,56},$	1	-20.766572	-20.766572
183	$p_{0,1}, p_{0,15},$	$p_{0,17},$	1	-39.838736	-39.838736
Sum					-196.20479276073146

$$\Delta G = -33.99720862062955$$

$$\Delta E = -0.07473045884690782$$

$$|E| = 7$$

$$|U| = 4$$

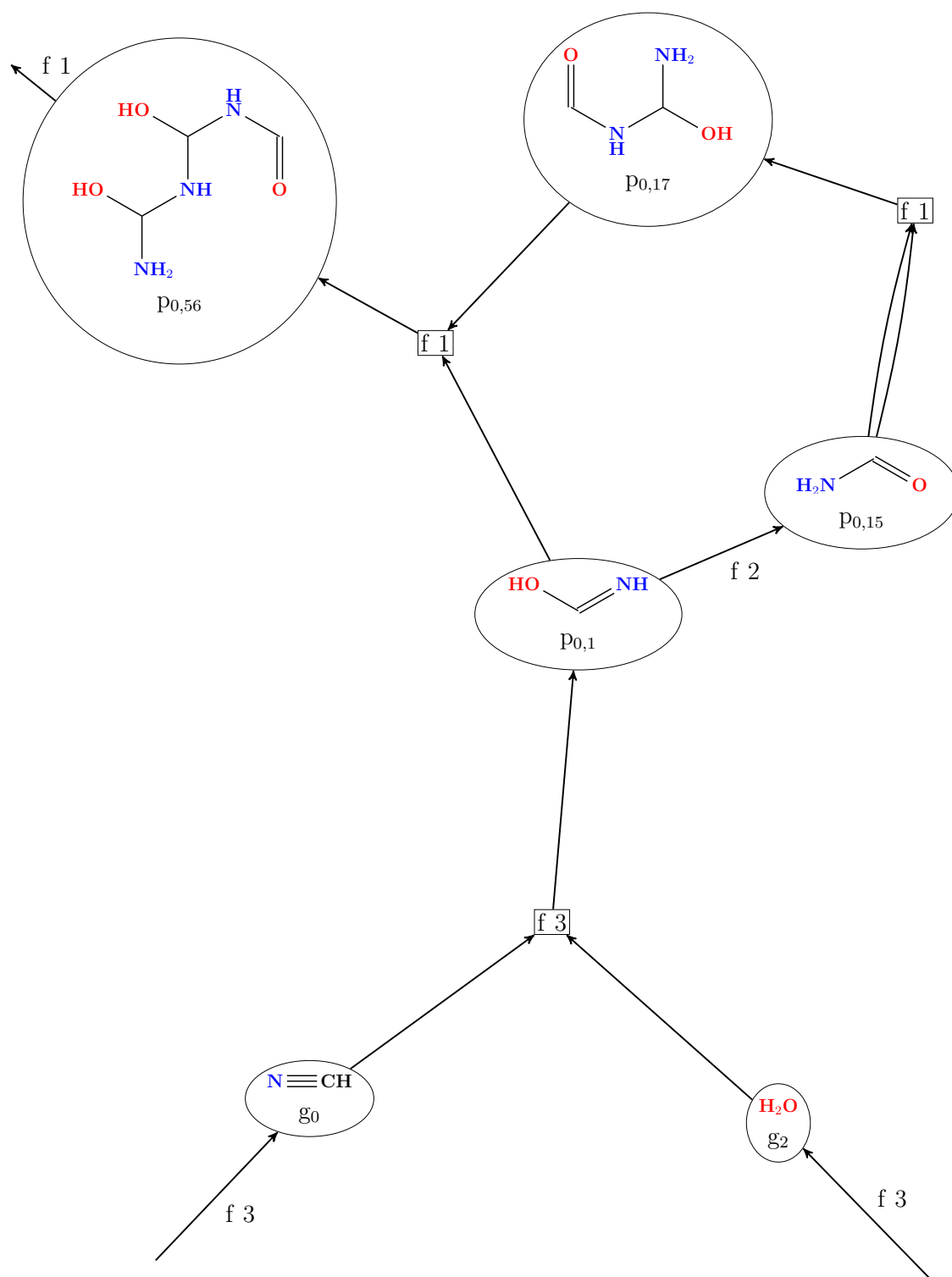
### 0.3.20 Solution 19

#### Overall Data

Objective value (non-integral): -0.0747305

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
$p_{\{0,15\}}$	0	0	-10.625174	1.000000	22
$p_{\{0,17\}}$	0	0	-21.248844	1.000000	45
$p_{\{0,1\}}$	0	0	-10.610080	1.000000	21
$p_{\{0,56\}}$	0	1	-31.869324	-6.000000	67

## Filtered Graph



File: out/204\_dg\_0\_11100\_f\_0\_19\_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	21
$p_{0,15}$	0	0	-27896.389963	1.0	-27893.064178	22
$p_{0,17}$	0	0	-55788.832737	1.0	-55785.506952	45
$p_{0,56}$	0	1	-83672.898792	-6.0	-83692.853502	67

Hyperedge	Source	Target	Flow	$x_e^{\Delta G}$	$\bar{x}_e^{\Delta G}$
6	$g_0, g_2,$	$p_{0,1},$	3	-95.748033	-95.748033
36	$p_{0,1},$	$p_{0,15},$	2	-39.628622	-39.628622
180	$p_{0,15}, p_{0,15},$	$p_{0,17},$	1	-0.210043	-0.210043
196	$p_{0,1}, p_{0,17},$	$p_{0,56},$	1	-60.562565	-60.562565
Sum					-196.20479276073146

$$\Delta G = -42.72739399784575$$

$$\Delta E = -0.07473045884690782$$

$$|E| = 7$$

$$|U| = 4$$

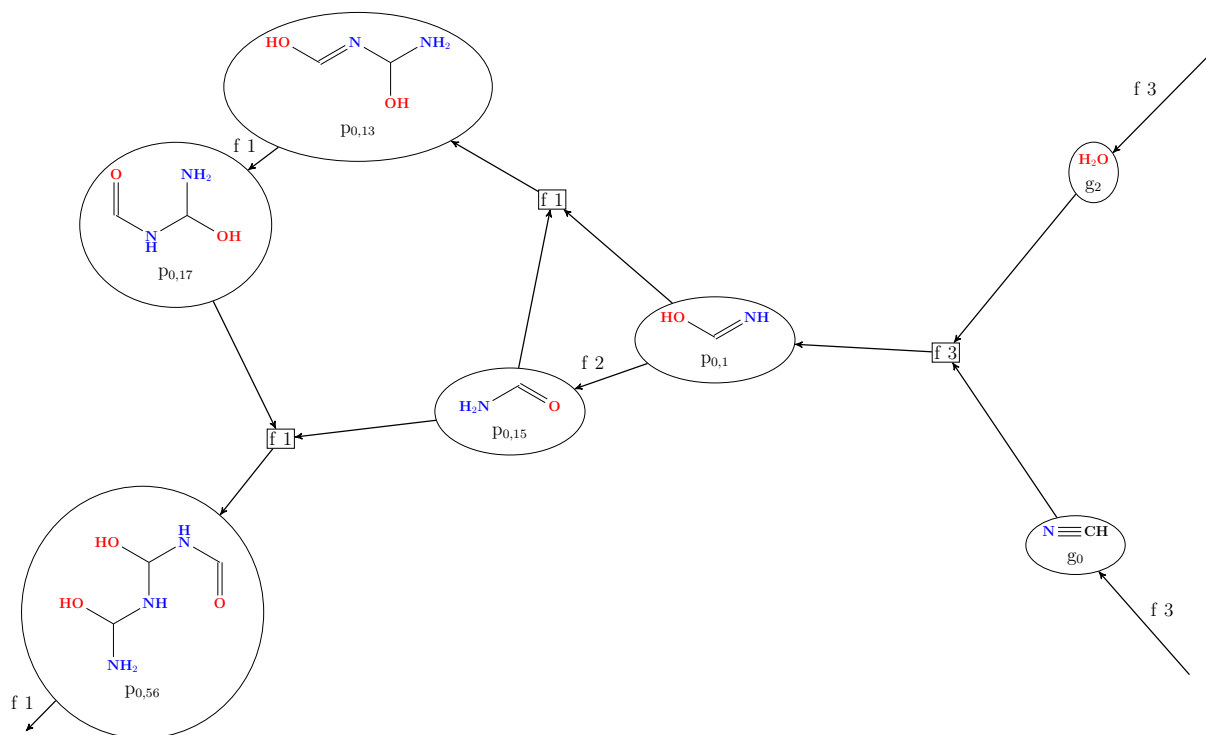
### 0.3.21 Solution 20

#### Overall Data

Objective value (non-integral): -0.0747305

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	-21.240635	1.000000	63
$p_{\{0,15\}}$	0	0	-10.625174	1.000000	2
$p_{\{0,17\}}$	0	0	-21.248887	-4.008710	64
$p_{\{0,1\}}$	0	0	-10.610101	1.000000	1
$p_{\{0,56\}}$	0	1	-31.869324	-6.000000	67

## Filtered Graph



File: out/213\_dg\_0\_11100\_f\_0\_20\_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
$p_{0,13}$	0	0	-55767.279594	1.0	-55763.953809	63
$p_{0,15}$	0	0	-27896.389963	1.0	-27893.064178	2
$p_{0,17}$	0	0	-55788.944315	-4.00871	-55802.276422	64
$p_{0,56}$	0	1	-83672.898792	-6.0	-83692.853502	67

Hyperedge	Source	Target	Flow	$x_e^{\Delta G}$	$\bar{x}_e^{\Delta G}$
6	$g_0, g_2,$	$p_{0,1},$	3	-95.803747	-95.803747
36	$p_{0,1},$	$p_{0,15},$	2	-39.572909	-39.572909
181	$p_{0,15}, p_{0,17},$	$p_{0,56},$	1	0.0	0.0
192	$p_{0,1}, p_{0,15},$	$p_{0,13},$	1	-18.229808	-18.229808
250	$p_{0,13},$	$p_{0,17},$	1	-42.487085	-42.487085
Sum				-196.2047927607253	

$$\Delta G = -42.72739452294568$$

$$\Delta E = -0.07473045884690548$$

$$|E| = 8$$

$$|U| = 5$$



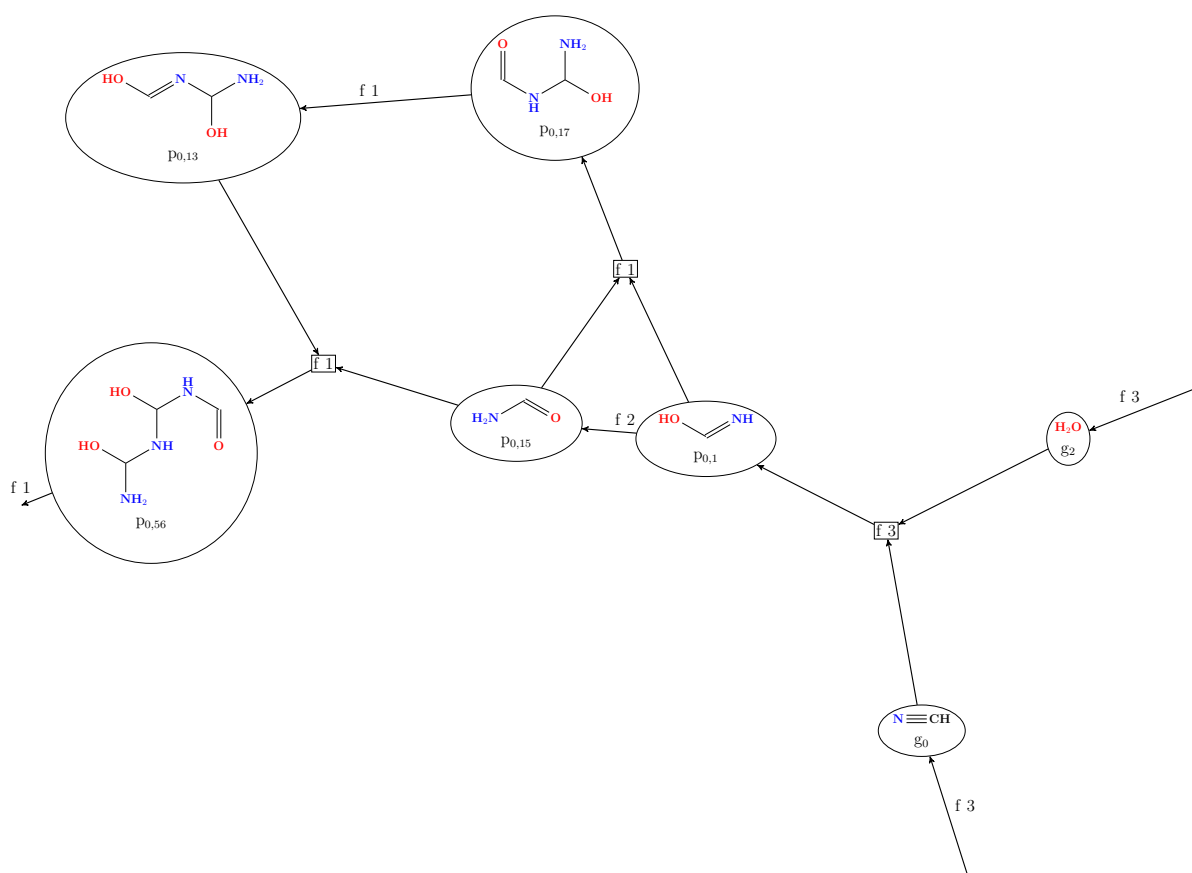
## 0.3.22 Solution 21

### Overall Data

Objective value (non-integral): -0.0747305

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	-6.000000	64
$p_{\{0,15\}}$	0	0	-10.625195	-1.557628	2
$p_{\{0,17\}}$	0	0	-21.248844	1.000000	4
$p_{\{0,1\}}$	0	0	-10.610101	-6.000000	1
$p_{\{0,56\}}$	0	1	-31.869324	-6.000000	67

### Filtered Graph



File: out/222\_dg\_0\_11100\_f\_0\_21\_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	-6.0	-27876.771765	1
$p_{0,13}$	0	0	-55767.391129	-6.0	-55787.345839	64
$p_{0,15}$	0	0	-27896.445756	-1.557628	-27901.626092	2
$p_{0,17}$	0	0	-55788.832737	1.0	-55785.506952	4
$p_{0,56}$	0	1	-83672.898792	-6.0	-83692.853502	67

Hyperedge	Source	Target	Flow	$x_e^{\Delta G}$	$\bar{x}_e^{\Delta G}$
6	$g_0, g_2,$	$p_{0,1},$	3	-124.904366	-124.904366
36	$p_{0,1},$	$p_{0,15},$	2	-21.160734	-21.160734
169	$p_{0,13}, p_{0,15},$	$p_{0,56},$	1	-2.586487	-2.586487
183	$p_{0,1}, p_{0,15},$	$p_{0,17},$	1	0.006113	0.006113
253	$p_{0,17},$	$p_{0,13},$	1	-7.659011	-7.659011
Sum	-196.2047927607253				

$$\Delta G = -42.72739452294568$$

$$\Delta E = -0.07473045884690548$$

$$|E| = 8$$

$$|U| = 5$$

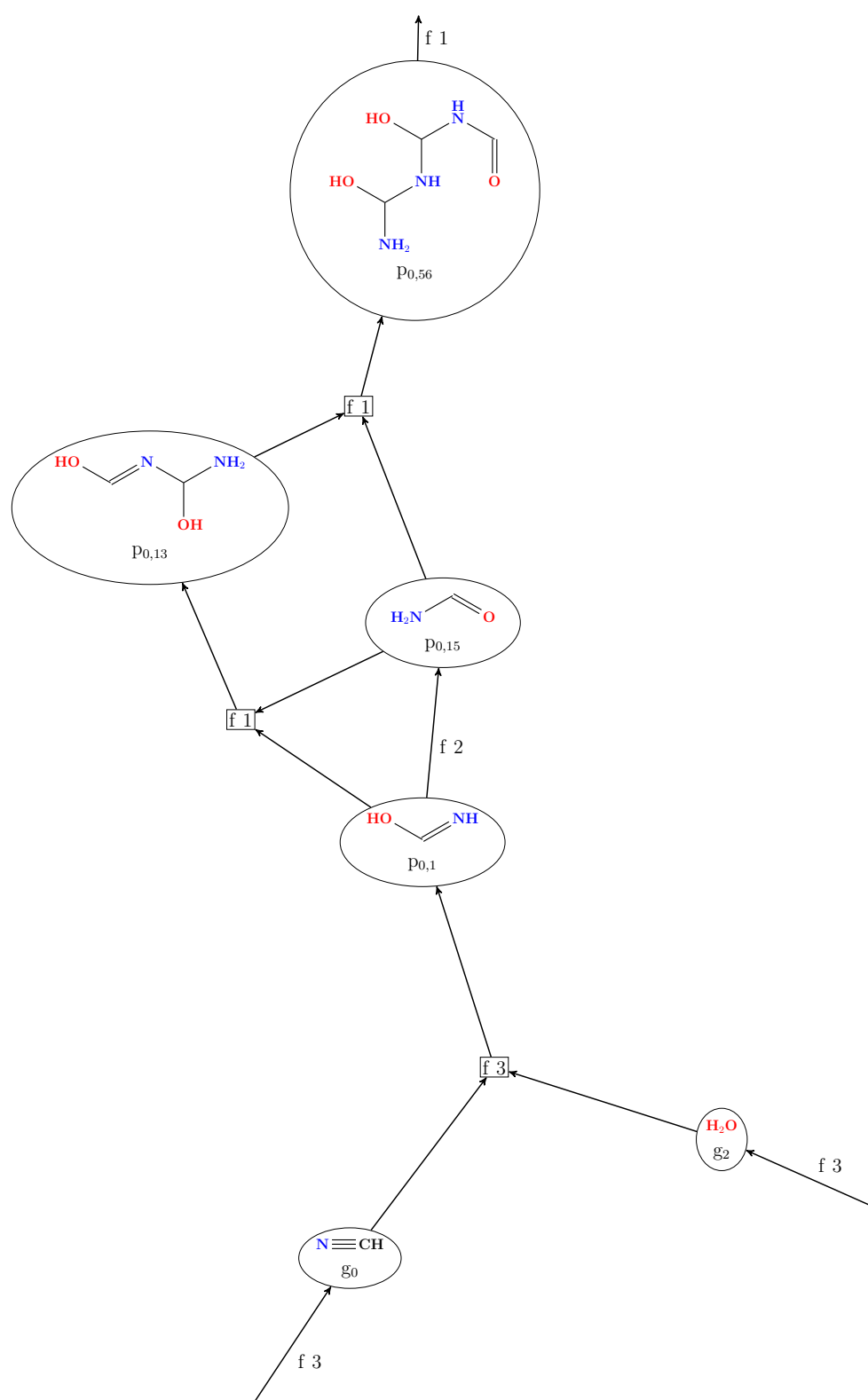
### 0.3.23 Solution 22

#### Overall Data

Objective value (non-integral): -0.0747305

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	-6.000000	64
$p_{\{0,15\}}$	0	0	-10.625174	1.000000	2
$p_{\{0,1\}}$	0	0	-10.610080	1.000000	1
$p_{\{0,56\}}$	0	1	-31.869324	-6.000000	67

# Filtered Graph



File: out/231\_dg\_0\_11100\_f\_0\_22\_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	-6.0	-55787.345839	64
$p_{0,15}$	0	0	-27896.389963	1.0	-27893.064178	2
$p_{0,56}$	0	1	-83672.898792	-6.0	-83692.853502	67

Hyperedge	Source	Target	Flow	$x_e^{\Delta G}$	$\bar{x}_e^{\Delta G}$
6	$g_0, g_2,$	$p_{0,1},$	3	-95.748033	-95.748033
36	$p_{0,1},$	$p_{0,15},$	2	-39.628622	-39.628622
169	$p_{0,13}, p_{0,15},$	$p_{0,56},$	1	-13.274931	-13.274931
192	$p_{0,1}, p_{0,15},$	$p_{0,13},$	1	-47.497676	-47.497676
Sum					-196.20479276071916

$$\Delta G = -42.72739426039572$$

$$\Delta E = -0.07473045884690313$$

$$|E| = 7$$

$$|U| = 4$$

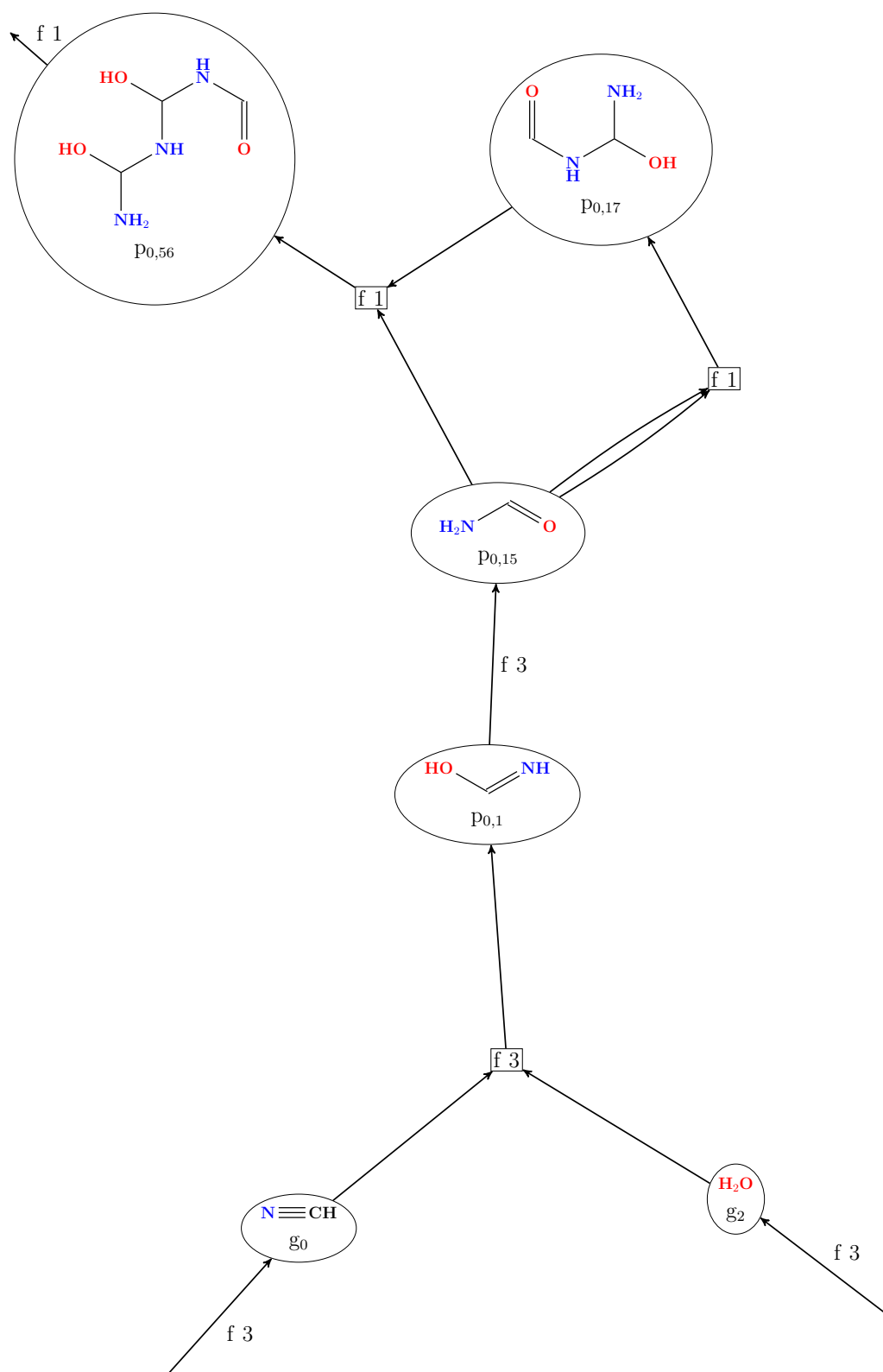
### 0.3.24 Solution 23

#### Overall Data

Objective value (non-integral): -0.0596367

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	19
$p_{\{0,15\}}$	0	0	-10.625174	1.000000	21
$p_{\{0,17\}}$	0	0	-21.248887	-4.008710	45
$p_{\{0,1\}}$	0	0	-10.610101	-6.000000	20
$p_{\{0,56\}}$	0	1	-31.869324	-6.000000	67

## Filtered Graph



File: out/240\_dg\_0\_11100\_f\_0\_23\_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	19
$p_{0,1}$	0	0	-27856.817054	-6.0	-27876.771765	20
$p_{0,15}$	0	0	-27896.389963	1.0	-27893.064178	21
$p_{0,17}$	0	0	-55788.944315	-4.00871	-55802.276422	45
$p_{0,56}$	0	1	-83672.898792	-6.0	-83692.853502	67

Hyperedge	Source	Target	Flow	$x_e^{\Delta G}$	$\bar{x}_e^{\Delta G}$
6	$g_0, g_2,$	$p_{0,1},$	3	-124.904366	-124.904366
36	$p_{0,1},$	$p_{0,15},$	3	-10.472289	-10.472289
180	$p_{0,15}, p_{0,15},$	$p_{0,17},$	1	-21.143985	-21.143985
181	$p_{0,15}, p_{0,17},$	$p_{0,56},$	1	0.0	0.0
Sum					-156.57617065693634

$$\Delta G = -42.72739426039572$$

$$\Delta E = -0.0596367138286667$$

$$|E| = 8$$

$$|U| = 4$$

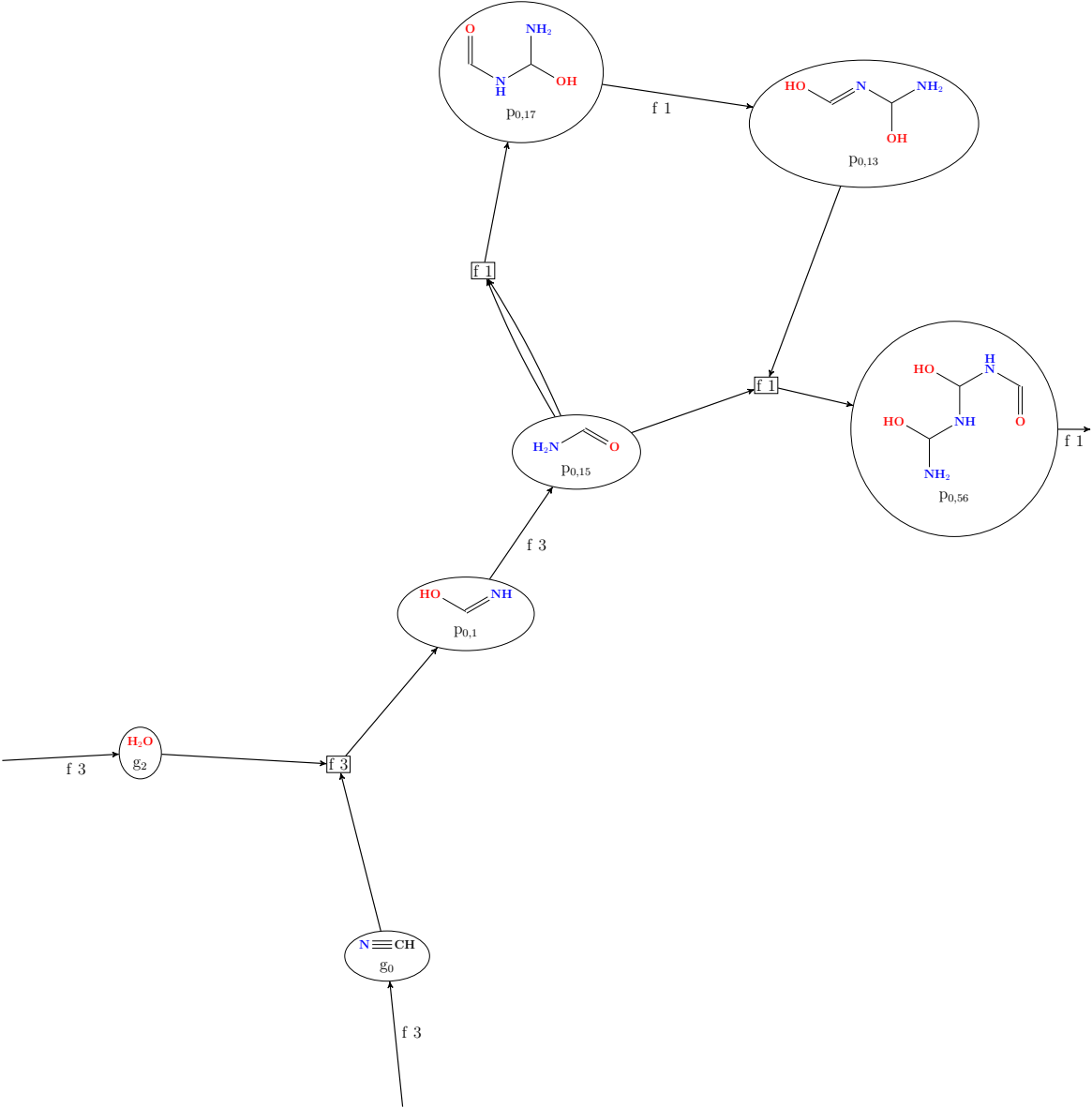
### 0.3.25 Solution 24

#### Overall Data

Objective value (non-integral): -0.0596367

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	-21.240678	-6.000000	64
$p_{\{0,15\}}$	0	0	-10.625174	1.000000	2
$p_{\{0,17\}}$	0	0	-21.248844	1.000000	63
$p_{\{0,1\}}$	0	0	-10.610101	-6.000000	1
$p_{\{0,56\}}$	0	1	-31.869324	-6.000000	67

Filtered Graph



File: out/249\_dg\_0\_11100\_f\_0\_24\_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	-27856.817054	-6.0	-27876.771765	1
$p_{0,13}$	0	0	-55767.391129	-6.0	-55787.345839	64
$p_{0,15}$	0	0	-27896.389963	1.0	-27893.064178	2
$p_{0,17}$	0	0	-55788.832737	1.0	-55785.506952	63
$p_{0,56}$	0	1	-83672.898792	-6.0	-83692.853502	67

Hyperedge	Source	Target	Flow	$x_e^{\Delta G}$	$\bar{x}_e^{\Delta G}$
6	$g_0, g_2,$	$p_{0,1},$	3	-124.959896	-124.959896
36	$p_{0,1},$	$p_{0,15},$	3	-10.472289	-10.472289
169	$p_{0,13}, p_{0,15},$	$p_{0,56},$	1	-13.274931	-13.274931
180	$p_{0,15}, p_{0,15},$	$p_{0,17},$	1	-0.210043	-0.210043
253	$p_{0,17},$	$p_{0,13},$	1	-7.659011	-7.659011
Sum					-156.57617065693017

$$\Delta G = -42.74405279305826$$

$$\Delta E = -0.059636713828664346$$

$$|E| = 9$$

$$|U| = 5$$