BIS Shrapnel
BUSINESS RESEARCH AND FORECASTING

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Dear Geoff, Katie and Andrew

Re: Update of Labour and Materials Cost Escalators for the Victorian and NSW Utilities Sectors

In September 2012, BIS Shrapnel was engaged by Envestra Ltd, SP AusNet and Multinet Gas ("the distributors") to update the labour and material cost escalators relevant to natural gas networks in Victoria and New South Wales over a 6 year period from 2012 to 2017 inclusive. The real cost escalators were used by Envestra, SP AusNet and Multinet Gas to estimate their operating and capital expenditure forecasts. These, in turn, were included in the distributors' revised revenue proposal to the Australian Energy Regulator (AER) on 9th November 2012. The updated real cost escalators follows our initial report prepared for Envestra, SP AusNet and Multinet Gas in November 2011.

Our wage forecasts are based on our outlook for the labour market at the national and state level, issues relevant to gas distribution networks in Victoria and New South Wales over the next 6 years as well as our macroeconomic forecasts. The Australian Bureau of Statistics (ABS) is the primary data source for the consumer price index, wages, employment, real gross value added and investment (including engineering construction) data. The most recent wages data is June quarter 2012 and the latest industry employment data is August 2012. The June quarter, 2012 was the latest available data for real gross value added (at the Australian level only) and investment. The detailed engineering construction data (by state and by category) have data only up to March quarter 2012. The latest data for Gross State Product (GSP) and real gross value added for state industry sectors was 2010/11 (annual data only is available). Other inflation and interest rates data were sourced from the Reserve Bank of Australia. Information concerning enterprise agreements was obtained from the *Trends in Federal Enterprise Bargaining , June Quarter 2012* report published by the Department of Education, Employment and Workplace Relations (DEEWR).

Our forecasts for all internal gas network-related labour cost escalation are based on forecasts of wages growth for the Electricity, Gas, Water and Waste Services sector for Victoria and New South Wales. We used the Wage Price Index (WPI) 'total hourly rates of pay excluding bonuses' published by the ABS as a measure of underlying wage inflation in the Utilities industry — exactly the same series used by Deloitte Access Economics in their report on Victorian Utilities WPI prepared for the AER, dated 28 May 2012.

Yours sincerely

Kishti Sen

Kishti Sen
Economist

Table 1a. Summary - Forecasts of Labour and Materials Cost Escalators

(percent change, year average, year ended December)

	2010	2011	2012	2013	2014	2015	2016	2017	2012-2017 (j)
		Actuals	Forecasts						
NOMINAL PRICE CHANGES									
1. Gas Network related Labour									
EGWWS AWOTE - Victoria (a)	**16.7**	**7.6**	**6.6**	**3.3**	**5.2**	**5.5**	**5.2**	**5.0**	**4.8**
EGWWS WPI - Victoria (a)	**3.6**	**4.0**	**3.9**	**3.9**	**4.4**	**4.7**	**4.3**	**4.3**	**4.3**
EGWWS AWOTE - New South Wales (a)	**6.3**	**2.1**	**4.5**	**5.3**	**5.2**	**5.5**	**5.4**	**5.3**	**5.3**
EGWWS WPI - New South Wales (a)	**4.8**	**2.8**	**3.3**	**4.6**	**4.6**	**4.8**	**4.6**	**4.3**	**4.6**
EGWWS AWOTE - Australia (b)	9.4	5.9	2.6	5.2	5.5	5.7	5.5	5.4	5.4
EGWWS WPI - Australia (b)	4.7	3.6	3.7	4.3	4.8	5.0	4.7	4.5	4.7
2. General Labour									
Business Services AWOTE- Victoria (c)		**-1.9**	**4.1**	**4.3**	**4.9**	**5.4**	**5.1**	**5.0**	**4.9**
Business Services WPI- Victoria (c)	**3.1**	**4.8**	**4.2**	**4.0**	**4.3**	**4.7**	**4.5**	**4.4**	**4.4**
Business Services AWOTE - New South Wales (c)		**4.0**	**3.4**	**4.5**	**5.2**	**5.6**	**5.3**	**5.1**	**5.2**
Business Services WPI - New South Wales (c)	**3.7**	**3.5**	**3.7**	**4.4**	**4.6**	**4.8**	**4.5**	**4.4**	**4.5**
PSTS AWOTE - Australia (b)	6.3	2.9	4.5	4.7	5.3	5.6	5.2	5.1	5.2
PSTS WPI - Australia (b)	3.6	4.4	4.4	4.4	4.6	4.8	4.5	4.4	4.5
ASS AWOTE - Australia (b)	4.8	-3.0	1.8	4.0	4.6	5.0	4.7	4.6	4.6
ASS WPI - Australia (b)	3.0	3.4	3.5	3.8	4.3	4.5	4.1	3.8	4.1
3. General Materials Prices									
General Materials Prices (d)	**2.8**	**3.4**	**1.7**	**2.7**	**2.5**	**2.5**	**2.5**	**2.5**	**2.5**
4. Gas Network Related Materials									
Crude Oil Price - CME Futures forecasts (f)	-0.8	5.7	5.0	3.5	2.0	7.5	4.7	-2.5	3.0
Polyethylene Price - futures oil price (e),(f)	**0.1**	**4.1**	**3.7**	**2.9**	**2.2**	**5.5**	**3.8**	**-0.5**	**2.8**
5. Contractor Escalation									
Construction AWOTE - Victoria	**5.4**	**-0.6**	**3.5**	**4.1**	**5.2**	**5.6**	**5.2**	**5.0**	**5.0**
Construction WPI - Victoria	**4.7**	**4.4**	**3.4**	**3.7**	**4.4**	**4.7**	**4.4**	**4.2**	**4.3**
Construction AWOTE - New South Wales	**-1.4**	**2.9**	**3.3**	**4.4**	**5.3**	**5.9**	**5.4**	**5.2**	**5.3**
Construction WPI - New South Wales	**3.3**	**3.7**	**3.2**	**3.9**	**4.6**	**5.2**	**4.7**	**4.4**	**4.6**
Construction AWOTE - Australia (b)	6.5	5.0	2.0	5.5	5.5	5.9	5.4	5.4	5.6
Construction WPI - Australia (b)	3.4	4.0	4.0	4.1	4.9	5.1	4.6	4.5	4.6
Gas & Fuel Construction Price Index (g)	**-8.8**	**-4.1**	**1.9**	**4.9**	**3.7**	**4.2**	**3.1**	**2.2**	**3.6**
Engineering Construction Price Index (h)	-0.1	1.8	2.6	4.2	5.1	3.5	1.7	2.1	3.3
Consumer Price Index (headline) (i)	2.8	3.4	1.7	2.7	2.5	2.5	2.5	2.5	2.5
REAL PRICE CHANGES									
1. Gas Network related Labour									
EGWWS AWOTE - Victoria (a)	**13.9**	**4.2**	**4.9**	**0.6**	**2.7**	**3.0**	**2.7**	**2.5**	**2.3**
EGWWS WPI - Victoria (a)	**0.8**	**0.6**	**2.2**	**1.2**	**1.9**	**2.2**	**1.8**	**1.8**	**1.8**
EGWWS AWOTE - New South Wales (a)	**3.4**	**-1.3**	**2.8**	**2.6**	**2.7**	**3.0**	**2.9**	**2.8**	**2.8**
EGWWS WPI - New South Wales (a)	**1.9**	**-0.6**	**1.6**	**1.9**	**2.1**	**2.3**	**2.1**	**1.8**	**2.0**
EGWWS AWOTE - Australia (b)	6.5	2.5	0.9	2.5	3.0	3.2	3.0	2.9	2.9
EGWWS WPI - Australia (b)	1.8	0.2	2.0	1.6	2.3	2.5	2.2	2.0	2.1
2. General Labour									
Business Services AWOTE- Victoria (c)		**-5.3**	**2.4**	**1.6**	**2.4**	**2.9**	**2.6**	**2.5**	**2.4**
Business Services WPI- Victoria (c)	**0.3**	**1.4**	**2.5**	**1.3**	**1.8**	**2.2**	**2.0**	**1.9**	**1.8**
Business Services AWOTE- New South Wales (c)		**0.6**	**1.7**	**1.8**	**2.7**	**3.1**	**2.8**	**2.6**	**2.6**
Business Services WPI - New South Wales (c)	**0.9**	**0.1**	**2.0**	**1.7**	**2.1**	**2.3**	**2.0**	**1.9**	**2.0**
PSTS AWOTE - Australia (b)	3.5	-0.5	2.8	2.0	2.8	3.1	2.7	2.6	2.7
PSTS WPI - Australia (b)	0.8	1.0	2.7	1.7	2.1	2.3	2.0	1.9	2.0
ASS AWOTE - Australia (b)	1.9	-6.4	0.1	1.3	2.1	2.5	2.2	2.1	2.1
ASS WPI - Australia (b)	0.1	0.0	1.8	1.1	1.8	2.0	1.6	1.3	1.6
3. General Materials Prices									
General Materials Prices (d)	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**	**0.0**
4. Gas Network Related Materials									
Crude Oil Price - CME Futures forecasts	-3.7	2.3	3.3	0.8	-0.5	5.0	2.2	-5.0	0.5
Polyethylene Price - futures oil pr (e),(g)	**-2.7**	**0.7**	**2.0**	**0.2**	**-0.3**	**3.0**	**1.3**	**-3.0**	**0.2**
5. Contractor Escalation									
Construction AWOTE - Victoria	**2.6**	**-4.0**	**1.8**	**1.4**	**2.7**	**3.1**	**2.7**	**2.5**	**2.5**
Construction WPI - Victoria	**1.9**	**1.0**	**1.7**	**1.0**	**1.9**	**2.2**	**1.9**	**1.7**	**1.7**
Construction AWOTE - New South Wales	**-4.2**	**-0.5**	**1.6**	**1.7**	**2.8**	**3.4**	**2.9**	**2.7**	**2.7**
Construction WPI - New South Wales	**0.5**	**0.3**	**1.5**	**1.2**	**2.1**	**2.7**	**2.2**	**1.9**	**2.0**
Construction AWOTE - Australia (b)	3.7	1.6	0.3	2.8	3.0	3.4	2.9	2.9	3.0
Construction WPI - Australia (b)	0.5	0.6	2.3	1.4	2.4	2.6	2.1	2.0	2.1
Gas & Fuel Construction Price Index (g)	**-11.7**	**-7.5**	**0.2**	**2.2**	**1.2**	**1.7**	**0.6**	**-0.3**	**1.1**
Engineering Construction Price Index (h)	-3.0	-1.6	0.9	1.5	2.6	1.0	-0.8	-0.4	0.8

(a) Electricity, Gas, Water and Waste Services (EGWWS) Average Weekly Ordinary Time Earnings (AWOTE) and Wage Price Index (WPI) for total hourly rates of pay excluding bonuses for Victoria and New South Wales
(b) Australian sector wage forecasts provided for comparison
(c) Weighted index of wages growth in Administrative and Support Services (ASS) and Professional, Scientific and Technical Services (PSTS)
(d) General Materials prices assumed to move in line with CPI
(e) We have used the A$ denominated US PPI (Producer Price Index) for Thermoplastic Resins and Plastic Materials as a proxy for Polyethylene Price.
(f) WTI prices are forecast from June CLM WTI contract prices, sourced from the Chicago Mercantile Exchange (CME)
(g) Gas Construction Price Index (Gas & Fuel Engineering Construction implicit price deflator)
(h) Engineering Construction Implicit Price Deflator for total Australia - alternative to Gas & Fuel Eng Const. IPD
(i) Headline CPI forecasts based on Reserve Bank of Australia forecasts to 2014 and then Commonwealth Treasury medium term projections
(j) For next regulatory period (ie Average Annual Growth Rate for 2013 to 2017 inclusive)