

## NSW-ACT Retail Gas Market High/Low Tolerance Test — Worked Example

Attachment 1 of the Retail Market Procedures (NSW/ACT) prescribe that AEMO must publish a High/Low Tolerance test for meter readings in the field.

The following High/Low Tolerance limits are utilised during the course of meter readings in the field.

**Current NSW/ACT Reading Tolerance Limits**

MJ Limit	Low 1 %	High 1 %
0	-75	+400
500	-75	+400
1500	-75	+400
2000	-75	+350
3000	-75	+270
4000	-65	+250
5500	-65	+230
8000	-65	+210
10000	-65	+200
20000	-75	+180
30000	-75	+170
50000	-75	+160
99999	-75	+150

### Example

Assume a supply point with a Base Load (BL) of 50MJ per day, Temperature Sensitivity Factor (TSF) of 65MJ per EDD, average Heating Value (HV) of 38.6 and Volume Correction Factor (VCF) of 1.0109. There are 91 days in the current billing period and we have recorded 400 EDDs.

Date	Reading (m <sup>3</sup> )	Flow (m <sup>3</sup> )	Energy (MJ)
1 Mar 2016	7560	104	4,014.4
1 June 2016	7868	308	11,888.8
1 Sep 2016	X		Y

STEP 1 Calculate the point estimate, based on the BL and TSF for this supply point:

$$\text{Estimated Consumption} = 50 * 91 + 65 * 400 = 30,550\text{MJ}$$

STEP 2 Apply the parameters of -75% and +170% (30,000 MJ Limit) to calculate the High and Low Consumption limits:

$$\text{High Consumption Limit} = (1+1.7) * 30,550 = 82,485\text{MJ}$$

$$\text{Low Consumption Limit} = (1-0.75) * 30,550 = 7,638\text{MJ}$$

STEP 3 Divide the High and Low Consumption limits by the HV and VCF to arrive at corresponding flows (m<sup>3</sup>):

$$\text{High Flow Limit} = 82,485 \div 38.6 \div 1.0109 = 2,114\text{m}^3$$

$$\text{Low Flow Limit} = 7,638 \div 38.6 \div 1.0109 = 196\text{m}^3$$

STEP 4 Add the High and Low Flow Limits to the previous index reading:

$$\text{High Index Limit} = 7,868 + 2,114 = 9,982\text{m}^3$$

$$\text{Low Index Limit} = 7,868 + 196 = 8,064\text{m}^3$$

In this example, the reading X should fall between the High expected reading of 9,982 and the Low reading of 8,064.

Any reading that is outside this range will cause the Portable Data Entry (PDE) to emit a warning sound to the meter reader. If the meter reader keys in the same index value and meter number, the number will be stored but with a flag to indicate that it has failed the Hi/Lo test.