### IPCC AR5 Carbon Budgeting for 2 Degrees Celsius

<table>
<thead>
<tr>
<th>IPCC AR5 3 ‘Probability’ Levels for 2°C</th>
<th>Cumulative Emissions 1800 - 2011</th>
<th>Plus &quot;Non-CO2-Forcings in RCP 2.6&quot; [these still exclude major feedbacks.]</th>
<th>Balance</th>
<th>Emitted Already since 1800</th>
<th>Final Residual IPCC Emissions Budget Balance</th>
<th>For 2°C Celsius reduce UKCA Emissions Budget [395 GtC] by these amounts . . .</th>
</tr>
</thead>
<tbody>
<tr>
<td>33%</td>
<td>1,560 GtC</td>
<td>880 GtC</td>
<td>680 GtC</td>
<td>616 GtC</td>
<td>264 GtC</td>
<td>131 GtC</td>
</tr>
<tr>
<td>50%</td>
<td>1,210 GtC</td>
<td>840 GtC</td>
<td>370 GtC</td>
<td>616 GtC</td>
<td>224 GtC</td>
<td>171 GtC</td>
</tr>
<tr>
<td>66%</td>
<td>1,000 GtC</td>
<td>800 GtC</td>
<td>200 GtC</td>
<td>616 GtC</td>
<td>184 GtC</td>
<td>211 GtC</td>
</tr>
</tbody>
</table>

**CBAT LOW Budget Integrated Feedback**
- **Slider Position -20**
  - 184 GtC

**CBAT LOW Budget Integrated Feedback**
- **Slider Position +40**
  - 220 GtC

**CBAT MEDIUM Budget Integrated Feedback**
- **Slider Position -28**
  - 263 GtC

UK Climate Act 395 GtC

IPCC AR5 66% odds for 2°C if past emissions = 616 GtC
IPCC AR5 50% odds for 2°C if past emissions = 616 GtC

UK Climate Act 395 GtC

220 GtC
IPCC AR5 33% odds for 2°C if past emissions = 616 GtC

UK Climate Act 395 GtC
IPCC AR5 WG1 final published the words/numbers quoted in the coloured box below. These were in the ‘Summary for Policy Makers’ & this is what their policy-relevant statement means - emit 46-126 GtC less than the UK Climate Act Budget [395 GtC] to keep under 2°C.

<table>
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<th>Three Probability Levels</th>
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<td>680 GtC</td>
<td>531 GtC</td>
<td>349 GtC</td>
<td>46 GtC</td>
</tr>
<tr>
<td>50%</td>
<td>1,210 GtC</td>
<td>840 GtC</td>
<td>370 GtC</td>
<td>531 GtC</td>
<td>309 GtC</td>
<td>86 GtC</td>
</tr>
<tr>
<td>66%</td>
<td>1,000 GtC</td>
<td>800 GtC</td>
<td>200 GtC</td>
<td>531 GtC</td>
<td>269 GtC</td>
<td>126 GtC</td>
</tr>
</tbody>
</table>

NB IPCC’s "Non-CO2 Forcings in RCP 2.6” [et al] are the ‘Non-CO2 Gases’. However, it should be clearly noted that the RCPs still OMIT most feedback effects. In other words the real prognosis for ‘climate-control’ is actually worse than the IPCC AR5 has suggested.


**IPCC AR5 Working Group One [WG1] Summary for Policy Makers [30 09 2013] says:** -

"Limiting the warming caused by anthropogenic CO2 emissions alone with a probability of: -

1. >33%,
2. >50%, and
3. >66% to less than 2°C since the period 1861–1880, will require cumulative CO2 emissions from all anthropogenic sources to stay between:

1. 0 and about 1560 Giga-tonnes Carbon [Gt C]
2. 0 and about 1210 Gt C, and
3. 0 and about 1000 Gt C since that period respectively.

These upper amounts are reduced to about:

1. 880 Gt C,
2. 840 Gt C, and
3. 800 Gt C respectively, when accounting for non-CO2 forcings as in RCP 2.6.

An amount of 531 [446 to 616] Gt C, was already emitted by 2011.”
UK Climate Act 44% Probability for 2° 395 GtC

IPCC AR 5  33% Probability for 2° 349 GtC

SUMMARY FOR  50% Probability for 2° 309 GtC

POLICY MAKERS  66% Probability for 2° 269 GtC

Less 46 GtC
Less 86 GtC
Less 126 GtC
NB: IPCC AR5 says UKCA Median Concentrations [423 PPMV by 2110] would result only if UKCA Emission-Budget was reduced by 126 GtC. Equals CBAT ‘Integrated Feedback’, slider position’ minus-26’ [267 GtC]. Omitted feedbacks included with ‘Segregated Feedback’, show its worse.
UK Climate Act 2010 - 2110
Contraction 395 GtC
Convergence by 2050
‘44% odds of < 2 °C