Unidentified Gas (UIG)

UIG:

Unidentified Gas (UIG) (previously known as Unallocated Gas UAG) is now a significant cost within your billed rates. UIG is the balancing factor that pays for the missing gas that cannot be allocated at a given time. The UIG is made up of many things including theft, profiling errors and meter insensitivities

Over the last few years Unidentified Gas (UIG) has been a more significant portion of the gas charge. A key driver of this is that the cost of unaccounted gas is linked to the market price. From a pricing perspective it needs to be estimated in advance and then reconciled if appropriate for the contract. Here we will look at a little information on some of those drivers to give a guide on what might be expected. Please note information here is indicative and may not relate exactly to your particular contract.

UIG the Forward Price and Reconciliation

The future cost of UIG is set at a point in time, for flexible contracts this is alongside your updated transportation rates. It uses an estimate of the forward gas market to build the price. This price when setting might not be reflective of the final out-turn price, this element can either mean that additional money could be owed if the market increased between setting and final or owed to you if the market drops. Depending on when your Transportation rates are set will depend on the price used.

Annual UIG cost = AQ * UIG% *Price/100

Example:

Small spc4 site:

60,000 * 17.3% * 4.63 / 100 = £481

Larger SPC4 site

10,000,000 * 2% * 4.62 / 100 = £9,262

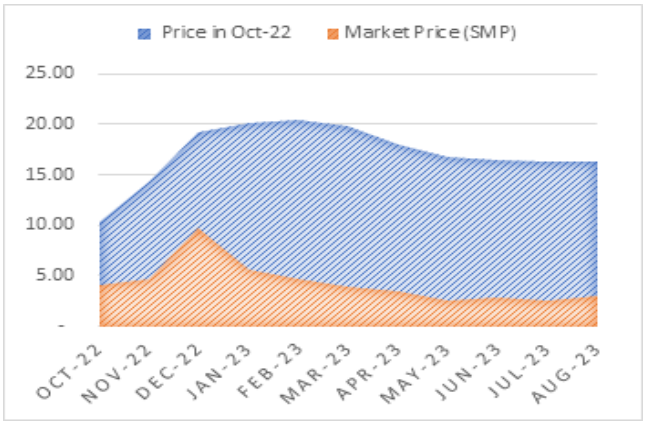

Figure 1: Price in Oct-22 and Market Price (SMP)

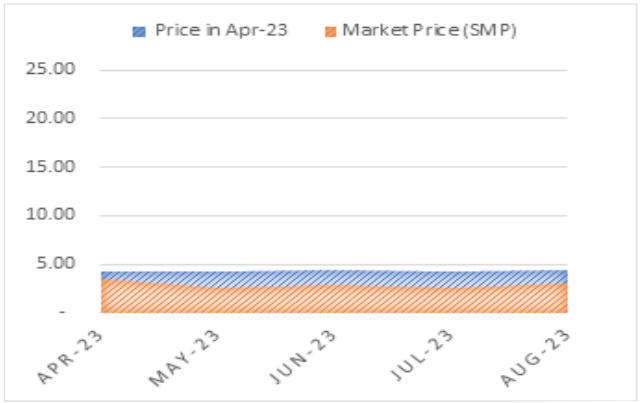

Figure 2: Price in Apr-23 and Market Price (SMP)

From the figures you can see it would be expected that due to price those who had their UIG set in October 22 (Figure 1) will have had UIG set at a price much higher (Blue area) than the SMP Market Prices (Red area), but rates set in April 23 (Figure 2) are looking to be only slightly higher. This is on Price only and does not consider the other variables, Prices used are indicative and may not relate to your contract. October 22 had incredibly high forward prices.

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How is UIG shared out? And how expensive is it?

How UIG is shared out is complicated there are 60 weighting factors, and every site uses one of those based on their supply point category (SPC options 1-4), their AQ and if they are Domestic and or prepayment. As a general rule of thumb SPC 4 have higher UIG rates and UIG rates decrease as sites increase in AQ. Due to the complex share out and how this is billed to shippers there are challenges working out an exact cost for any customer at any point in time.

The Allocation of Unidentified Gas Expert (AUGE) works out these factors each year but the exact value per matrix position for a day will be dependent on actual throughput volumes both industry and by matrix position. TGP use all information at hand to estimate what we believe the final UIG % will be after all reconciliations have been processed. This is then utilised within the pricing at contract or TPT depending on contract type to create a £ value we expect for the customer for the period.

Why is Market Price used for the cost of UIG?

UIG is an extra volume that suppliers are expected to purchase, but they don't know what that day's volume will be in advance. The daily value can vary significantly day to day.

Shippers and suppliers get very short notice of what the value will be, so use the day ahead and within day market to purchase the UIG gas which is needed to ensure the system is balanced.

If they did not, they would have to pay the relevant SMP (system margin price) price in cashout. The first estimate they get of what it will be is the day before, but it will then change within day as well. When looking forwards at what UIG costs would be, the forward market is the best proxy.

In the below two figures you can see the significant impact market price has on UIG. They use the same 2 example AQ's and UIG% but a pp kwh price more reflective of September in 2020 (1.26), 2021 (3.55) and 2022 (26.8). Please note the different scale on the two graphs but the same trend. The market was very volatile in 2022, you can see now forward levels are more comparable to 2021.

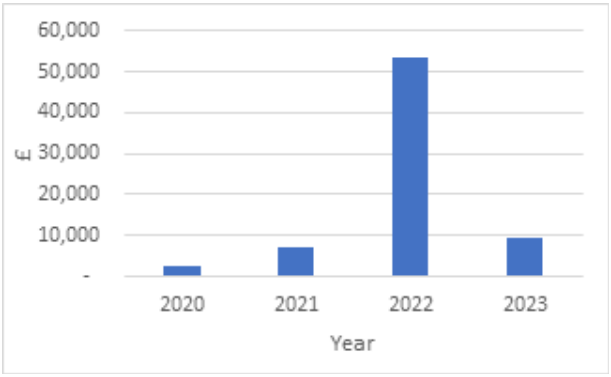

Figure 3: Small AQ Annual UIG cost (60,000)

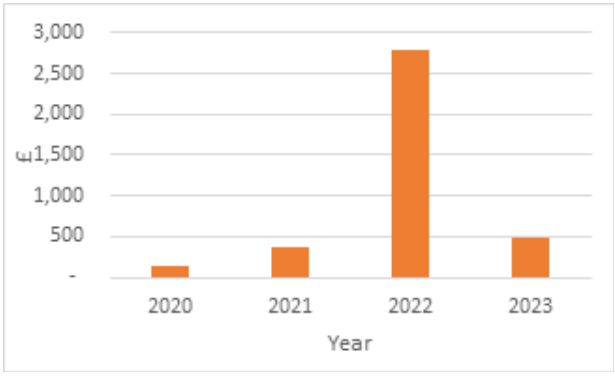

Figure 3: Large AQ Annual UIG cost (10,000,000)

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How is Industry UIG% calculated?

Since Nexus went live in June 2017, UIG has been the balancing factor within the gas industry and used the below calculation i.e. gas that cannot be allocated on any given day to an end consumer.

UIG = Total LDZ Energy – DM Energy – NDM Energy – Shrinkage

UIG = Unidentified Gas

LDZ = Local Distribution Zone

DM = Daily Metered, Supply Point Class 1 & 2

NDM = Non-Daily Metered, Supply point Class 3 & 4

Shrinkage = A fixed energy figure for Gas lost from the transportation network, calculated by Network operators.

UIG is made up of many things, including the largest component – theft of gas, as well as errors in profiling and meter sensitivities. It is highly variable day to day but generally settles down as a greater proportion of meters are read and reconciliations are processed and is quite consistent once day to day variations are taken out

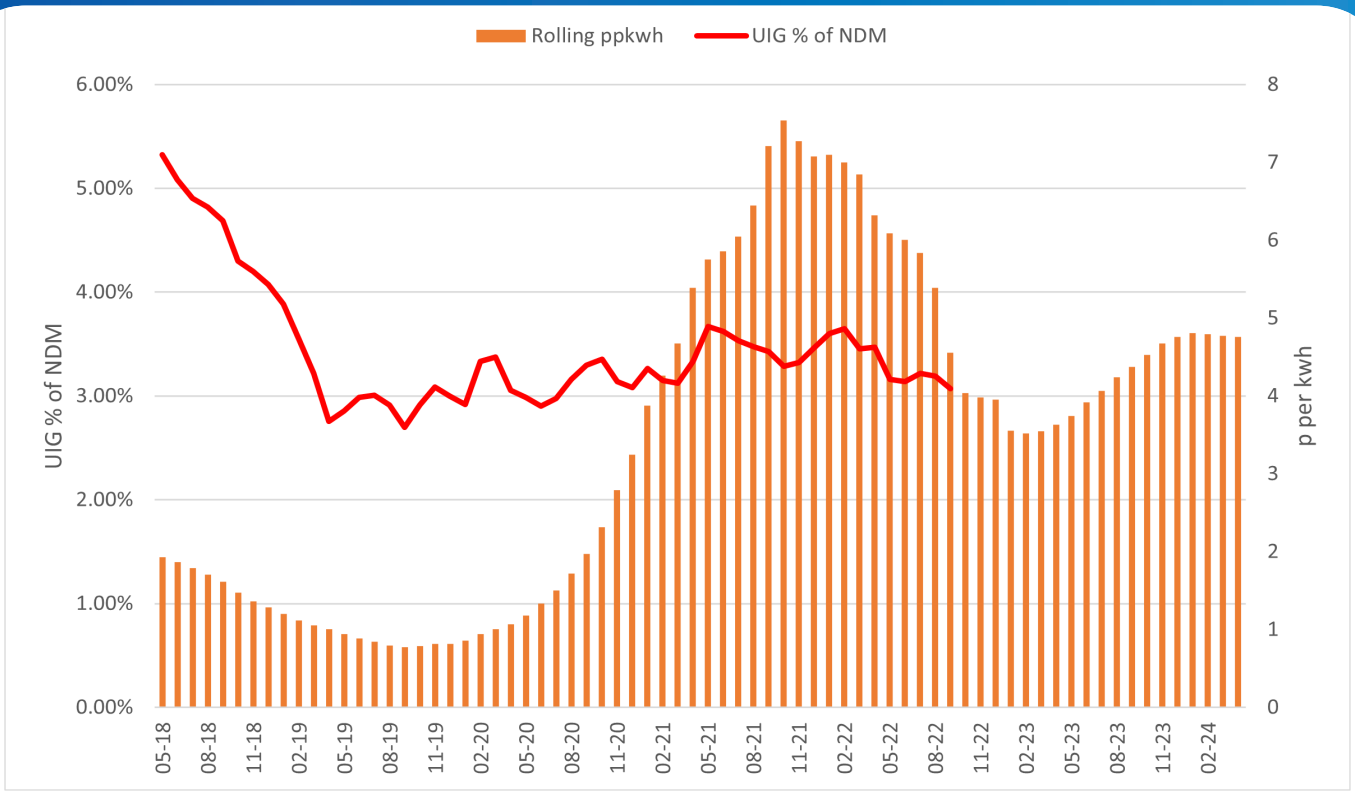

Figure 3: Industry Rolling 12 month UIG as % of NDM Demand with forward 12 month price estimate

Q&A on next page...

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Why has UIG been negative at Allocation

At allocation UIG has been generally lower in 2022 than previous years, with very low rates in early winter months. What this indicates is that in general the NDM algorithm is giving more volume to NDM sites than they need. A key driver is likely to be AQ's not reflecting current consumption. AQ's can take a while to respond to changes in consumption and it may be that people continued to react to high prices by lowering consumption. Figure 3 shows that these negative values turn positive through reconciliation. It also shows that after reconciliation and smoothing over the year the industry UIG ends up around 3% of NDM demand. General feeling is that over time it is likely UIG is marginally increasing as a %, theft could be increasing or at least maintaining, whereas registered demand is reduced due efforts to minimise bills. The interaction of these two would make UIG increase as a % of throughput. The effort to reduce consumption is the driver of the larger UIG reconciliation, initial UIG is calculated based on AQ, but AQ's were higher than actual consumption. Reconciliations for this period are still on going.

Figure 3 also has bars showing the trend of market prices as a 12 month flat average (forward facing), which demonstrate the volatility we saw last winter but that currently we appear to be in lower period but might see increases again in the future. Prices are still very high compared to long history but much lower than 2021 and 2022.

Allocation refers to how much gas is allocated to a site on day for NDM (SPC 3 & 4) sites this is based on a standard formula and AQ's. Obviously, this is unlikely to be exactly what the site uses. A sites meter reads are then used to adjust their volume to what the meter read volumes show, this is called reconciliation and is done as an industry not just shipper by shipper.

What is going on in the Industry at the moment?

The Annual process is starting again in September ready for the values for use in October 2024. TotalEnergies actively engage in this process throughout the year. These drive the weighting factors for UIG and therefore the % used in the formula. They cannot make any impact onto the market price.

MOD 831: This MOD was raised in November 2022 and looks to replace the weighting table with a flat share out approach. It will not alter the amount of UIG the industry has on a day or how the reconciliation of this works. It will just alter how much people get; to make the share our much easier to understand and replicate.

MOD 831 A: This is essentially the same as 831 but it removes SPC1 sites from the share out, they would have a 0 and not pick up UIG. All other sites would have a flat share of UIG associated to consumption.

MOD850: This is a more fundamental change to the UIG process and would create a new factor which goes to distribution networks. This would also become the balancing element of UIG which would mean that the element paid by shippers and ultimately customers would be able to be set in advance. This solution will likely take a lot longer in development and implementation so if supported and approved would not happen imminently.

The UIG % can change year to year but for 2023/24 we only seeing relatively small movement from 2022/23.