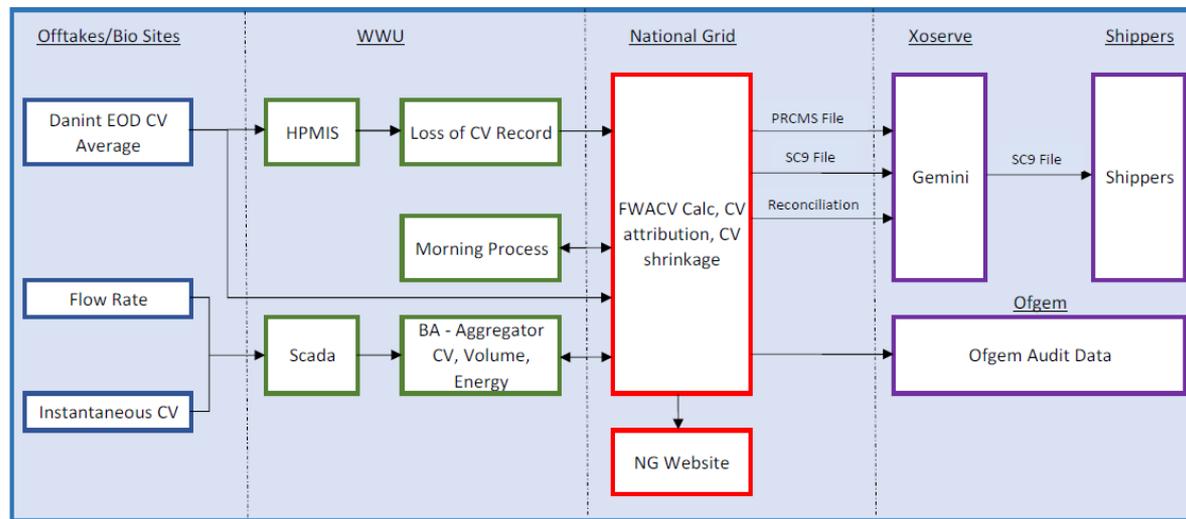# FWACV – Briefing Pack July 6th

FWACV – Current Systems view

Loss of CV Record - this is a manual process (in SGN) whereby we go through data coming into HPMIS looking for gaps in gas data / alarms and email this through to NG (via a spreadsheet)

Morning Process – Daily checks for alarms, which sites are offline (AKA Section 12) NG emails us, we reply

NG Red Box – Effectively a similar but cut down HPMIS, although it does have functionality which HPMIS doesn't have

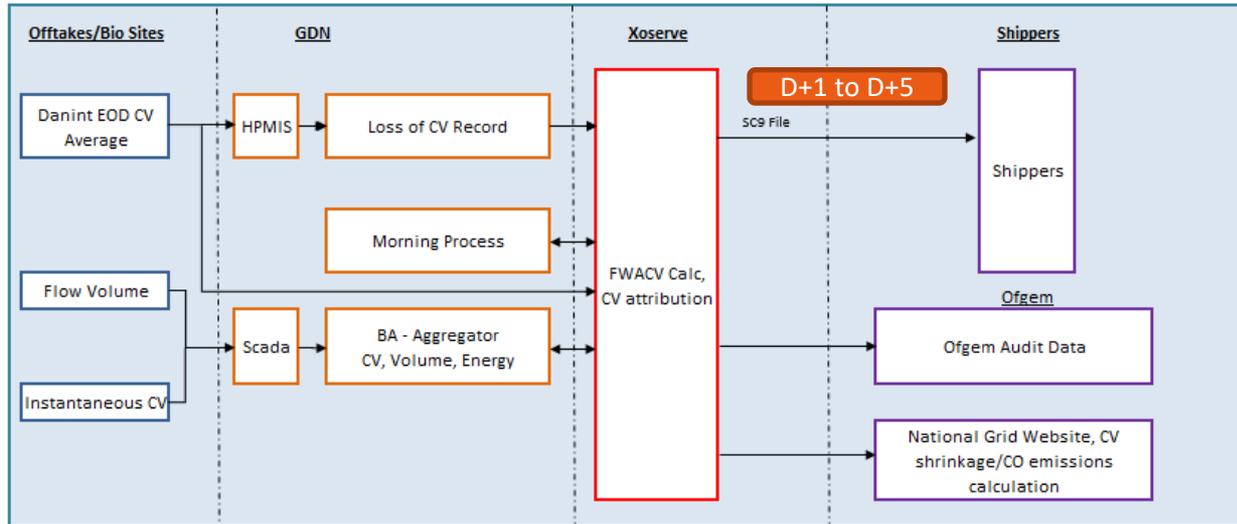**NG Website** – Public record, no specific consumers

Gemini – NTS system operated by Xoserve, reconciles booking of gas loads from DN's
** Note – 06/07/20 – update from NG – SC9 file does not transmit via Gemini to Shippers. It flows via the IX to Shippers from NG..

FWACV – Option 1a / 1b / 1c

FWACV Process (Option 1) Xoserve

Pros:
- Simple
- DN Access to GEMINI
- Holistic view of whole system

This option is effectively replacing the NG system with a modified GEMINI system

Cons:
- Ongoing OPEX
- Implementation timeline

FWACV – Option 1a / 1b / 1c

Option 1a – Replace NG system with a modified Xoserve hosted Gemini system. Gemini would consume data from all DN's, process and then pass onto Shippers

Option 1b – Exactly the same as Option 1a but includes an additional step between DN's and Xoserve. This would be passing collected files into NG (who could extract what was needed for their activities) before passing on the full set of data onto the Gemini system

Option 1c – This is seen as being the same as options 1a or 1b, but would be a 3rd party hosted service. This is likely to be Wipro / DNVGL / Enzen or other established Gas Sector supplier

Please note that these are all high level indicative costs / and system development timeframes

Option	1a	1b	1c
Capex (development costs)	£100-160k	£100-160k	£230k
Opex (ongoing costs)	£50-150k	£50-150k	???
Total (high level, excluding project wrap around costs etc)	£150-310k	£150-310k	£230k+
Timeframe	21 Weeks?	21 Weeks?	21 Weeks?

SGN

FWACV – Option 1a / 1b / 1c

Of the 3 high level options discussed there was general consensus from the GDN's that one of the variants of Option 1 was the favoured option. However, it was noted that there would be some significant overheads for each of the DN's – these are listed below:

- Each DN would need to provide significant Technical IT resource to work with a selected vendor to ensure that system changes, interface work and any associated firewall and network changes are made and tested

- There would be a requirement for an IT project manager to be assigned for each DN's changes

- Given that ALL DN's would need to work together with a vendor on a proposed solution, it was thought that the DN's would approach the vendor to supply an overarching PM resource to help with co-ordination between the DN's and the Vendor technical team(s)

When adding up the estimated costs of the above the total was circa £1m+

FWACV – Cost information

All options (I think!) are drawing from a proposal sent to Cadent from Wipro. The table below is taken from that proposal and outlines a high level timeline estimate and ROM (rough order of magnitude) development costs for the various solution options.

Trying to establish which of these options relate to the options stated in the previous slides is difficult, however my assumptions are as follows:

Common Hosted Service (full) = Option 1c

Core MVP / Full Functionality = Option 2

Common Hosted Service (mvp) = Options 1a / 1b

The numbers don't exactly match up, and I'm unsure if the Opex costs are "fingers in the air" or coming from another document which I haven't seen yet.

Option	Details	Timeline	Cost (GBP)
Core MVP	Developed on existing DNCS technology stack	15 Weeks	70K
Full functionality	Developed on existing DNCS technology stack	15 Weeks	110K
Common hosted service (MVP)	Cloud native serverless stack (Tenancy to be provided by DNs)	21 Weeks	170K
Common hosted service (Full)	Cloud native serverless stack (Tenancy to be provided by DNs)	21 Weeks	230K

SGN

FWACV – Option 2

FWACV Process (Option 2) GDN's
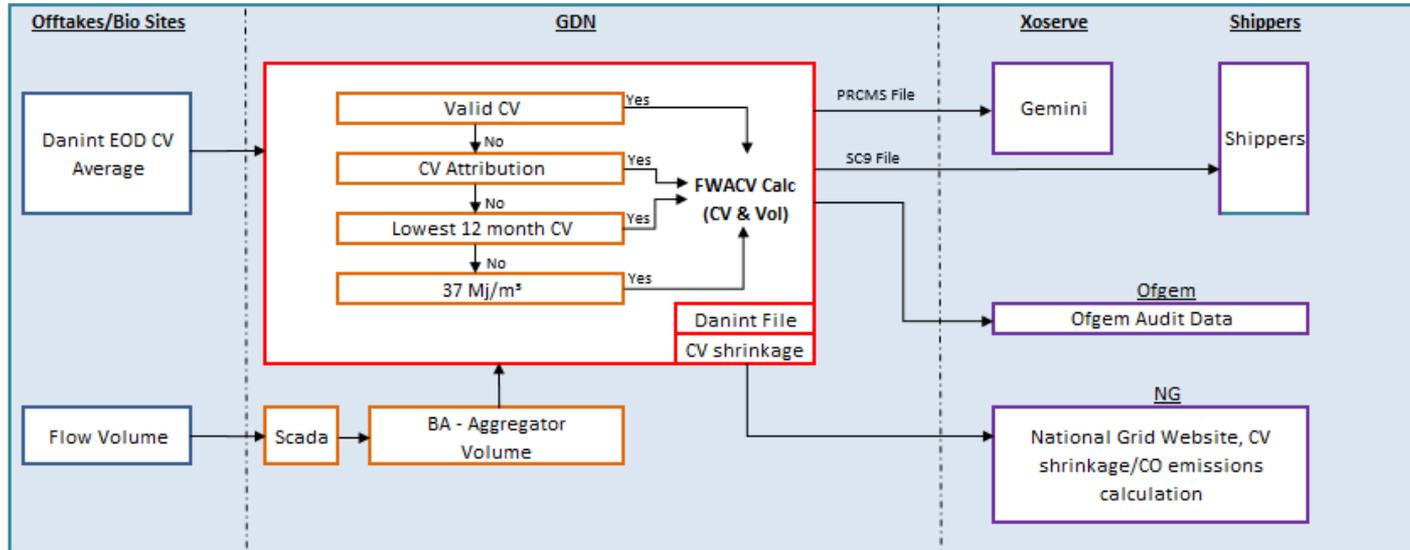
Pros:
- DN Access to GEMINI

This option is each GDN replacing the NG system with a modified system to handle the calculations (HPMIS or BA – Other vendors costs), enabling each DN's modified system to exchange information and allowing the DN's access to GEMINI (Xoserve costs)

Cons:
- Ongoing OPEX
- Multiple Interfaces (Human and IT)
- Greater business costs for DN's
- Needs to be standardised in order to work
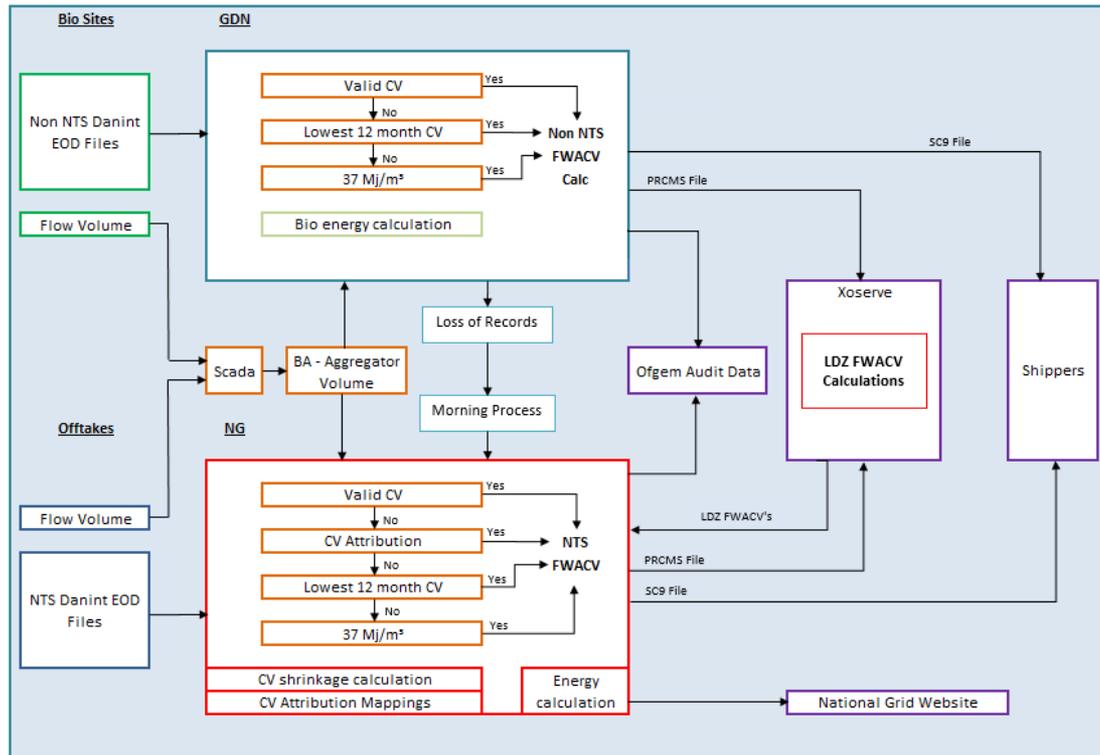- Additional FTE's for DN's

FWACV – Option 2

Option 2 – This option is each of the DN's modifying their existing systems (HPMIS / BA or similar) to include FWACV calculations, and then pass these on to the Gemini system. The issues around this are mainly around the interfaces needed between the different DN systems to share information needed to complete the calculations.

Please note that these are all high level indicative costs / and system development timeframes

Option	Xoserve	Other Vendors
Capex (development costs)	£60-110k	£42-110k
Opex (ongoing costs)	£20-50k	???
Total (high level, excluding project wrap around costs etc)	£80-160k	£110k+
Timeframe	15 Weeks?	???

SGN

FWACV – Option 3

FWACV Process (Option 3) Shared NTS, GDN & Xoserve

Pros:
- All parties use the data that they have to hand

Cons:
- Similar to Option 2, although with greater cost and complexity
- Lack of ownership or traceability
- Complexity

This option is each GDN processing Bio Energy Calcs with a modified system to handle the calculations (HPMIS or BA – Other vendors costs), enabling each DN's modified system to exchange information, allowing the DN's access to GEMINI (Xoserve costs), and NG modifying their system to allow it to give NTS EOD information to DN's

FWACV – Option 3

Option 3 – This option similar to Option 2, with each of the DN's modifying their existing systems (HPMIS / BA or similar) to include FWACV calculations, but only for the BioSites, with NG calculating FWACV figures from the Offtakes and then both sets of information are passed onto Xoserve to reconcile and manage. As with Option 2, the issues around this are mainly around the interfaces needed between the different DN systems to share information needed to complete the calculations – More interface work would be required in Option 3.

Please note that these are all high level indicative costs / and system development timeframes

Option	Xoserve	Other Vendors
Capex (development costs)	< Option 1 but > Option 2	Similar to Option 2
Opex (ongoing costs)	???	???
Total (high level, excluding project wrap around costs etc)	???	???
Timeframe	???	???

SGN