



# Offtake Metering Strategy



# Offtake Metering Upgrade Strategy

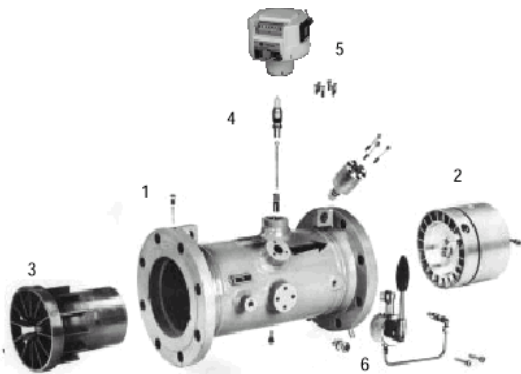
	Pre RIIO	Current position	End of RIIO
Orifice plate	14	6	2
Turbine	17	11	11
USM	4	21	27
Totals	35	38	40

NGN meter types deployed across its 23 offtakes.



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asonic



Fiscal meter and check meter combined:  
FLOWSIC600 2plex

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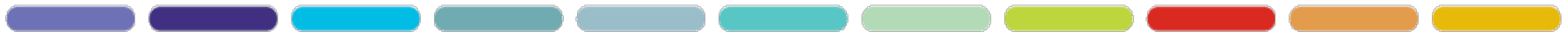
- NGN strategy was initially intended to upgrade NGN's Offtake metering to enhance flow measurement at 13 sites specifically those sites with low flow.
- The stipulation from Ofgem was that the output target should be “meter accuracy of no greater than 0.1% of total throughput”. This meant that the strategy being employed by NGN at the start of RIIO was not the most effective and efficient way of tackling this output challenge.
- NGN quickly identified that the strategy needed to be thoroughly reviewed to enable NGN to develop a robust method for identifying how this output should be dealt with.



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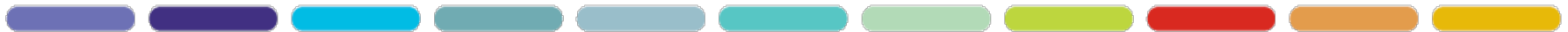
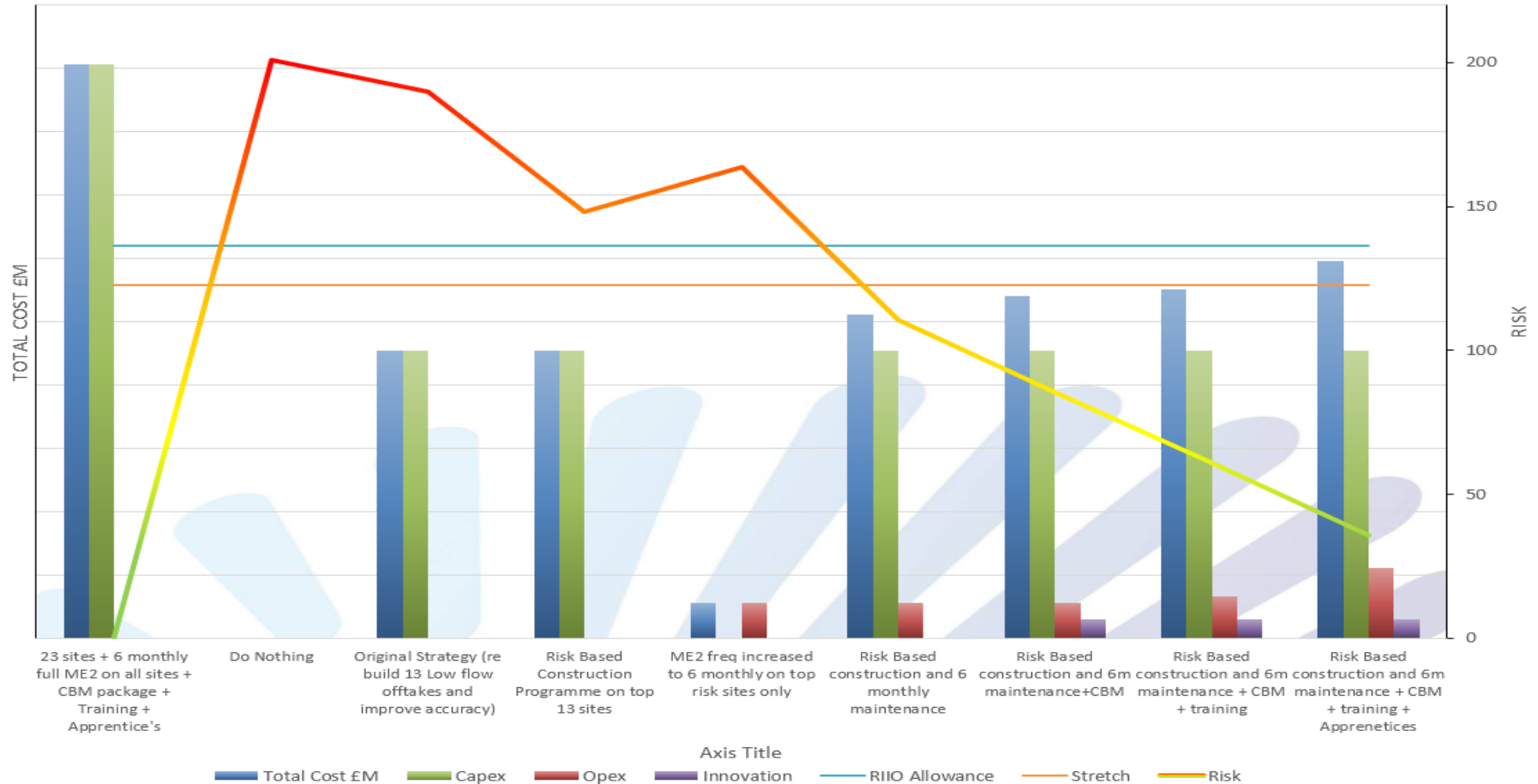
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- Offtakes were ranked in terms of Volume Risk, Low Flow and metering Audit issues. Most emphasis was placed on the volume risk score and less applied to the two others this produced a definitive ranking enabling NGN to see which sites they should be focusing on.
- This has produced a definitive list of sites which will be targeted and upgraded as part of a Risk based construction programme. Reduces the risk of an error occurring and is expected to cost no more than the original build programme.
- Although this reduces the risk of an error occurring as most NGN errors are caused by equipment failure. It doesn't reduce the risk much, so NGN have explored what alternative/additional measures could be used to further reduce the risk of an error able to cause an output failure.



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Expenditure Vs Risk



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- NGN have begun the implementation of the risk based upgrade programme with increased maintenance frequencies, condition based monitoring and additional training. NGN's ARM team also recommended that consideration should be given to the immediate employment of Instrumentation apprentices but this is on hold during the maintenance outsourcing.

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- These measures are in addition to NGN's ongoing practices, including
- Independent Ofgem Audit (10% per annum but increased during upgrades)
- SGS Gas examiner Meter validation visits (3 monthly)
- Meter validation witness programme NGUKT

