

Final Pricing Proposals

National Grid Metering
2012/13 Pricing Consultation



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Executive summary

Consultation activity

Ofgem published their Decision document (reference 100/12) in July 2012, detailing proposals for traditional metering arrangements in the transition to smart metering. They also requested National Grid to undertake a pricing consultation process with a view to satisfying the principles Ofgem set out. We launched our pricing consultation process in August 2012, with our Approach and Pricing Model document being issued shortly afterwards on 17 September 2012. Following the publication of both this document and our Initial Proposals document, issued on 30 January 2013, we asked stakeholders for their views in respect of our assumptions for the future of traditional metering, the nature of the new B-MPOLR and NMM obligations Ofgem propose and our resulting pricing proposals.

Consultation responses and final pricing proposals

Based on the consultation responses received and the latest smart roll-out information published by DECC, we have outlined our Final Pricing proposals, detailing the rationale and assumptions used to shape them.

Stakeholders were broadly supportive of our approach and pricing as detailed in our Initial Proposals document but recent supplier smart metering roll-out projections published by DECC have led us to remodel traditional meter displacement rates. Our pricing approach continues to be based on the use of tariff caps and the cross-subsidy between domestic credit meters (DCM) and prepayment meters (PPM). Although some stakeholders continued to request that more cost-reflective charging be introduced, other stakeholders remained concerned that unwinding the cross-subsidy may result in increases to prepayment charges. Our descriptions of the new Backstop Meter Provider

of Last Resort (B-MPOLR) and National Metering Manager (NMM) obligations were generally accepted following clarification of some aspects such as the asset transfer mechanism. Stakeholders also broadly agreed with our assumptions and projections for future workloads, additional services and industry data flow requirements, when considered in light of projected traditional meter displacement rates.

In line with commitments made in our Initial Proposals document, we have also issued an open letter to Ofgem regarding the future de-regulation of the Industrial and Commercial (I&C) market. Whilst we accept stakeholders' views that this market is not sufficiently competitive overall to be de-regulated at present, we continue to believe that competition in the I&C market is evident and future de-regulation remains appropriate. We set out the market forces and criteria which might be evidenced at such a time and urge Ofgem to more accurately define and establish the overall size of the non-domestic sector in readiness for de-regulation.

Regarding the allocation of the Regulatory Asset Value (RAV), stakeholders were generally supportive of our use of Methodology 2, as detailed in our Initial Proposals. We have therefore used this methodology as the basis for our Final Proposals and believe this offers the most appropriate approach for allocation of the RAV. With the rate of return, we have applied the fundamental calculations underpinning the Distribution business price control, in line with Ofgem guidance, and have rebased our rate of return calculations on the post-tax, real basis which RIIO sets out. We also demonstrate why we believe that the inclusion of some proportion of risk element in the overall rate of return remains appropriate.

Next steps

We held a stakeholder forum on Tuesday 21 May 2013 to detail how consultation responses received have shaped our thinking and how we have reached our Final Proposals. Following issue of this document and the submission of our Final Proposals to Ofgem, we then expect Ofgem to undertake further consultation on these proposals and the necessary licence changes which will result. We expect the revised tariff caps and new B-MPOLR and NMM obligations to then be implemented towards the end of the year.



1 Introduction



1.1 Background

The last Price Control Review (PCR) affecting gas metering occurred in 2001 as part of the Transco Gas Distribution PCR, with tariffs applied with effect from April 2002. Key features of this review were:

- Obligations to provide and install domestic meters (the Meter Provider of Last Resort or MPOLR obligation)
- Tariff caps for the pricing of domestic credit and prepayment meter installation, transactional work to exchange a credit meter for a prepayment meter and daily meter reading services
- A general obligation not to unduly discriminate.

Tariff caps consisted of an aggregated amount for the provision, installation and maintenance of meters, adjusted by the Retail Price Index (RPI) each year and set against an initial expectation that they would be lifted after two years. They were also constrained to accommodate an initial differential between the tariffs for domestic credit and prepayment meters of £15.

In 2006, Ofgem announced their intention to undertake a PCR of the regulated gas and electricity businesses but chose not to progress a PCR of gas metering price controls and licence conditions whilst the competition investigation into National Grid's alternative rental contracts (the MSAs) was underway. Controls and caps established in 2002 were rolled forward.

More recently, Ofgem has undertaken its Review of Metering Arrangements (RoMA) which set out views on the transition from traditional to smart metering.





1.2 Review of Metering Arrangements (RoMA) findings

Ofgem published their document “Decision and further consultation on the regulation of traditional gas metering during the transition to smart metering” in July 2012¹. This confirmed their plans to proceed with their “minded to” approach detailed in the “Review of Metering Arrangements”, published in December 2011² and confirmed several central issues:

- The introduction of a national back-stop metering provider of last resort, the B-MPOLR obligation, with the Distribution network owning the obligation (NGG) being known as the National Metering Manager (NMM)
- Recognition that certain market participants may wish to transfer their metering assets to the NMM for the purpose of maintenance activities. The NMM would be expected to facilitate such a transfer on a fair market commercial rate and non-discriminatory basis
- The initiation of a process to review the regulated gas metering tariffs in operation since 2002, with National Grid asked to lead a pricing consultation with stakeholders
- The continuance of existing, market-based arrangements in respect of Post Emergency Metering Services (PEMS) with meters installed as a result of PEMS eligible upon request for adoption by the NMM.

Ofgem’s findings regarding the B-MPOLR and NMM will change NGG’s licence obligations and create new roles for us to undertake. Amongst other factors, our pricing model sought to consider these new obligations in proposing the levels of future tariffs along with some key issues that Ofgem expected us to consult upon:

- Rate of return
- Allocation of the Regulatory Asset Value (RAV)
- Assumptions for domestic metering
- Assumptions for non-domestic metering sector
- Uncertainty mechanisms.

¹ Ofgem document reference 100/12 available via <http://www.ofgem.gov.uk/Markets/sm/metering/tftm/roma/Documents1/Final%20Policy%20Decision%20Document%2025%2007%2012.pdf>

² Ofgem document reference 175/11 available via <http://www.ofgem.gov.uk/Markets/sm/metering/tftm/roma/Documents1/ROMA%20Final%20Decision.pdf>

1 Introduction



1.3 The transition to smart metering

Smart metering will see the replacement or upgrading of traditional gas meters for new, smart technologies by the end of 2019.

It will create challenges associated with the transition and reduction in numbers of traditional meters and will change the nature of some activities undertaken under the current regulatory framework as traditional metering becomes a smaller, more marginal activity. Given the length of time since the previous PCR and in light of the changes that smart metering will bring, we welcome Ofgem's invitation to conduct a pricing consultation with our stakeholders. In the transition to smart metering, we believe NGM has a vital role to play in the efficient management of traditional gas metering services, maintaining appropriate services for traditional meters yet to be replaced.

The Supplier licence conditions for the installation of smart meters came into force on 30 November 2012³ and confirmed the expected date for the completion of the mass roll-out at that time remained the end of 2020. Subsequently, DECC have announced a delay to the smart roll-out timetable, with the mass roll-out start date delayed to 2015 and the end date now confirmed as December 2020. Despite this, however, the Secretary of State for Energy and Climate Change, the Rt Hon Edward Davey MP, confirmed that he still expected the vast majority of smart meters to be in place by the end of 2019⁴.

The exact start date for the mass roll-out remains unclear and several other key enablers for the transition to smart metering, such as SMETS2 approval and DCC mobilisation, have yet to be completed. The pace at which Suppliers will complete the transition to smart meters is therefore difficult to accurately predict, with latest estimates of completion rates significantly different from those published by DECC previously.

A central theme of our pricing proposals focuses on maintaining an effective level of metering service, able to both facilitate the efficient roll-out of smart metering and to properly support the requirements for traditional meters until they are replaced.

In Section 3 of this document, we detail our modelling assumptions and pricing proposals, how these have been modified in light of our consultation process and the final proposals we are now submitting.

³ DECC Supplier licence modifications document available via https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/65646/7107-smart-meters-mod-elc-gas-licences.pdf

⁴ DECC written ministerial statement regarding the amendment to the smart roll-out timetable available via <https://www.gov.uk/government/speeches/written-ministerial-statement-by-edward-davey-smart-metering>

kromschroder BK-G4

Q_{max} 9 m³/h
Q_{min} 0.04 m³/h
V 2.0 dm³
P_{max} 75 mbar
I imp 9 0.01m³

G4

G4 K5008542 03 12

Under the Gas Act, this meter is the property of the gas supplier to this premises.

0000 24 m³

17798854 G.Kromschroder AG Osnabrück 2003

THINK YOU CAN SMELL GAS

the control valve. Open doors and windows.
Do NOT turn electrical switches on or off
Do NOT smoke.

CONTACT THE GAS EMERGENCY SERVICE
TELEPHONE NUMBER IS
111 999
Apply until

2 Stakeholder consultation activities



2.1 Form and duration of consultation

Ofgem published their Decision document in July 2012, detailing proposals for traditional metering arrangements in the transition to smart metering and requesting National Grid to undertake a pricing consultation process. We issued our Preliminary Stakeholder Consultation questionnaire in August 2012, confirming our intention to run a pricing consultation and seeking to understand how our stakeholders wished to contribute to the process. From the responses received, a combination of workshops and bilateral meetings were requested, along with the facility to return written responses to our consultation questions.

We issued our Approach and Pricing Model document on 17 September 2012, detailing our initial assumptions and approach to pricing. The issue of this document launched our stakeholder consultation period, which then ran until 02 November 2012. We received 12 written responses to our consultation and a number of additional stakeholders participated in workshops and bilateral meetings in order to both explore some of the fundamental aspects of our proposals in more detail and as a means to share their views.

Engage Consulting's report⁵, detailing the outputs from each workshop and bilateral meeting held with various stakeholders and summarising overall responses to our approach and pricing model, can be found on our website.

Following the close of our initial stakeholder consultation period, we considered the feedback provided whilst continuing to undertake further work with Ofgem against a number of key aspects of our proposals. Our Initial Proposals were then issued on 30 January 2013, with a further period for stakeholder review running until Friday 22 February 2013. We received an additional 6 written responses to this secondary phase of our consultation.

A list of the stakeholders contacted throughout this process is shown in Appendix 1. All written responses received during each phase of our consultation process have been placed on our website, unless confidentiality has been requested.

⁵ Engage Consulting report on findings from stakeholder workshops and bilateral meetings available via <http://www.nationalgrid.com/uk/Metering/PricingConsultation/Documents>



3 Our final proposals



3.1 Positioning our Domestic and I&C businesses

Our final proposals assume that our estate of domestic-sized meters, remaining under tariff caps, will be prematurely displaced as gas suppliers comply with the smart meter mandate. We expect the majority of U6 traditional meters in non-domestic properties to be displaced by smart meters, in line with the government mandate and supplier licence conditions laid last year. We expect our U6 assets in the non-domestic sector to suffer displacement at a broadly similar rate to domestic U6 meters.

Larger Industrial and Commercial (I&C) meters can remain in service until normal end-of-life requires their replacement (subject to commercial pressures) as they will not necessarily need to be exchanged to become 'smart'. Where advanced metering or Automated Meter Reading (AMR) facilities can be retro-fitted, these assets can remain in service until normal retirement. The growth in Automated Meter Reading and other 'smart' meter reading technologies has created a need for a guaranteed pulse output, driving significant programmes of meter replacement and/or upgrading and providing an opportunity for entry of new market participants. Some new participants are offering on request to install AMR equipment and also replace the metering equipment, thereby utilising the request for AMR as a market entry into meter provision.

We agree that, under most assessments, our portfolio of installed meters represents a dominant position in the metering market but do not believe this is the most useful measure of effectiveness of competition. In recent years the majority of all new non-domestic meter installations have been undertaken by our competitors. We have also seen displacement of meters where customers believe a more commercially attractive option is available and believe we are seeing signs that certain types

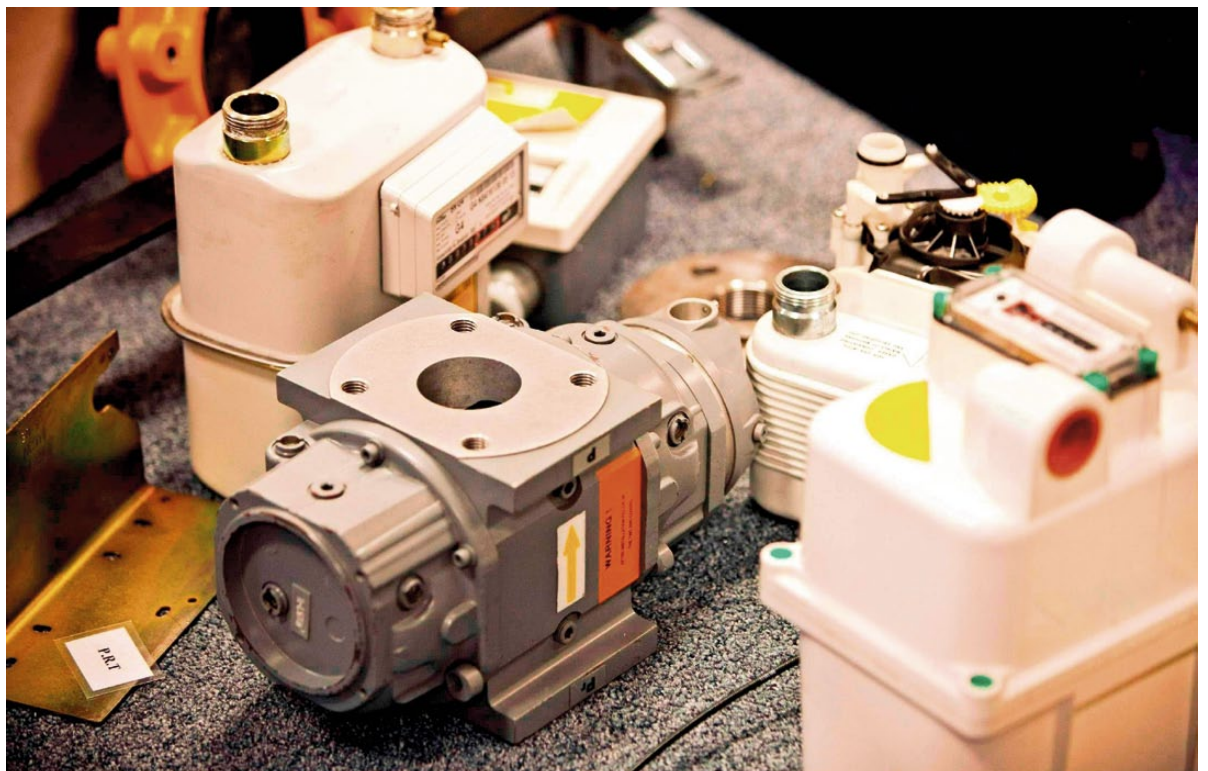
of assets are being cherry picked. Our current projections assume that our I&C meter populations in these sectors will reduce significantly by 2019/20, given existing rates of displacement and our current share of new meter installations. However, we believe that evidence of competition recently seen in the market may result in even faster displacement so our non-domestic meter population might more than halve over the same period.

Participants are confident that services currently available in the market will remain available after the transition to smart metering commences, and at competitive market rates. Furthermore, alternative service providers are clearly currently able to compete successfully on a range of different service offerings, demonstrated by several contract awards recently announced. We agree that the preservation of the ability for new entrants to become active in the market is a more meaningful measure for assessing competition than market share and attrition rates, given the assumption that existing competition law addresses the concern of dominance. We also agree that more intrusive regulations are unnecessary and potentially harmful to competition developing, being likely to prevent any further new market participants from being able to compete effectively.

We now accept that the current regulatory controls governing I&C metering will continue in place, with the general obligation not to unduly discriminate and competition law providing the necessary control mechanisms. However, as signalled in our Initial Proposals, we have written an open letter to Ofgem setting out the market forces and criteria we would expect to be considered and proposing an appropriate point for regulatory controls to be lifted. A copy of this letter can be found on our website. We ask Ofgem to undertake further analysis to more accurately establish the overall size and segmentation of the non-domestic sector to assist in independently clarifying the extent of National Grid's market share. We believe this would help to determine the appropriate criteria

and extent of competitive activity for de-regulating this market.

We continue to maintain that customers' drive for enhanced services and a continuing downward pressure on rental charges are the principal factors in defining the future for the I&C business. As a result, we will continue to review our pricing to ensure it represents an appropriate and competitive level for the services we deliver, as well as providing greater granularity and transparency which customers increasingly expect.



3 Our final proposals



3.2 Tariff caps and regulatory price controls

We expect this pricing consultation to agree tariff caps and regulatory price controls for a period commencing from the date new licence obligations are implemented until 31 December 2020, following completion of the mass roll-out of smart meters at the end of 2020.

Our Final Proposals continue to assume that the cross-subsidy between DCM and PPM meters remains in place and that displacement rates for PPMs and DCMs remain proportional to the overall meter population. PPM tariff caps remain at a level consistent with the current control and amendment to the overall revenue is implemented via a change to the DCM tariff cap.

We recognise the requirement not to create a basis of charge which could negatively impact more vulnerable consumers but also acknowledge some stakeholder feedback received suggesting that a more cost-reflective basis of charging be adopted. Discussions with consumer groups clearly indicated that any change which would increase the differential between DCM and PPM charges would face significant criticism and challenge.

Varying views have been expressed regarding the timing of PPM displacement in the roll-out profile, particularly if arrangements with the DCC for services to support these meters are unavailable from the start of the mass roll-out. Unwinding the cross-subsidy would result in higher tariffs for PPMs, leaving customers exposed to these higher rates for longer in the event of a later PPM displacement profile. Delays in PPM displacement could also result in greater levels of maintenance activities for a longer period, potentially disadvantaging parties with a greater proportion of PPMs in their metering portfolio, such as the GDNs. Other stakeholders have suggested that they would prefer to see early

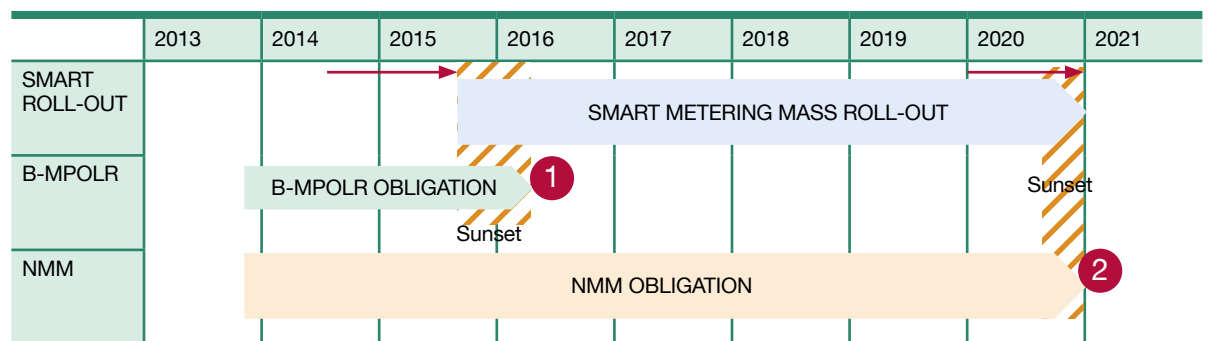
displacement of PPM meters, given their higher cost to serve. We recognise the uncertainty that exists regarding the timing of PPM displacement and the potential for this to result in additional maintenance activities and costs but this uncertainty also constrains the modelling we are able to undertake.

In response to our Initial Proposals, one stakeholder also suggested that the existing cross-subsidy should not be retained in respect of domestic-sized meters in non-domestic properties. NGG's metering charges for domestic-sized meters are regulated and detailed in Special Condition E19 of NGG's Gas Transporters Licence. Non-tariff capped charges predominantly related to our I&C business are regulated through a requirement not to unduly discriminate, detailed in Special Condition A43. For domestic-sized meters, we demonstrate this requirement by using the relevant tariff cap as the basis for establishing pricing for all our U6 meters, regardless of whether they are installed in domestic or commercial premises. Currently, non-domestic meters are rented through our regulated P&M contract and as a result, we continue to observe the obligation not to unduly discriminate between different classes of customers utilising the same class of meter. However, in the event of our being able to offer an alternative contract for I&C customers, we may review rental prices accordingly, much as we do with the P&M and Alternative MSA contracts for our Domestic customers.



3.3 Backstop Meter Provider of Last Resort and National Metering Manager

Figure 1 – B-MPOLR and NMM obligation durations



- 1 – Tariff cap lifted for new meters installed after B-MPOLR sunset
- 2 – Tariff cap lifted for all remaining traditional meters in situ

The basis for our final proposals regarding the B-MPOLR and NMM obligations remains largely unchanged from our Initial Proposals document, being generally supported by stakeholders throughout the consultation process.

Government now expects the mass roll-out of smart metering to commence late in 2015 and conclude by the end of 2020. We therefore expect the B-MPOLR and NMM obligations to commence at the end of 2013, with the B-MPOLR obligation falling away at the start of the mass roll-out of smart meters. The NMM obligation will remain in place for the duration of the roll-out, with the sunset for this obligation linked to the end-date, rather than the start-date. Our approach aims to ensure we have the capability and capacity to meet estimated future demand, to the quality and safety standards expected, despite uncertainty over the volume and meter types likely to be requested.

The B-MPOLR obligation will require us to meet any reasonable request by a Distribution network to provide, install and maintain a traditional domestic gas meter – we do not intend to install any form of smart meter under this obligation. Charges for services provided under the obligation would be tariff capped but we would expect this to be lifted for any new traditional meters fitted after the obligation ceases. We would expect that any traditional meter installation services we may continue to offer after the B-MPOLR obligation falls away to be on a commercial basis. Rental charges for meters installed prior to that date would remain tariff capped.

The NMM role entails the ownership and maintenance of domestic-sized meters, both in our existing portfolio and for those meters fitted under the B-MPOLR obligation, together with the adoption of traditional meters fitted as a result of PEMS jobs. We would expect to offer these

3 Our final proposals

meters under our existing contractual frameworks, detailing similar terms for maintenance or future exchange. Some stakeholders have commented that there may be a sizeable number of traditional meters yet to be displaced by the end 2019, given the inherent uncertainties in the rate of the mass roll-out of smart meters. Supporting Ofgem's stated objective that the RoMA process should seek to facilitate the smart metering roll-out, we propose that tariff caps for traditional meters still in situ fall away. However, given the recent change to the smart roll-out timetable, we now propose that this occurs at the end of mass roll-out, 31 December 2020.

The NMM will also be required to offer terms to adopt other existing traditional meters, where requested, undertaken on a commercial basis through a transparent and non-discriminatory process. This is in line with Ofgem's original intention of providing other meter operators the opportunity to exit traditional metering but without necessarily offering protection from asset stranding. As with our Initial Proposals, we continue to propose that asset transfer under the NMM obligation is open to all and that the mechanism used to agree the transfer value will recognise the present value of future cashflows for the assets. We propose that the valuation mechanism will assess specific technical criteria, with the resulting price then being calculated based on estimated future cashflows prior to displacement due to expected end of technical life or displacement by a smart meter, whichever is sooner. We would also expect to take into consideration the existence of any relevant warranty documentation and maintenance history information, coupled with an assessment of the completeness of the mandatory data required, in order to reach an appropriate valuation. A template setting out the technical

criteria required for assessment is available via our website⁶, enabling specific numbers of each asset make, model and location amongst these other factors to be assessed, prior to calculating a transfer value. Where requested, we would be willing to provide estimates of asset transfer valuations using this approach, pending final agreement on the level of tariff caps. We would also expect assets sold to National Grid under the NMM obligation to then be provided under our existing contracts.

In our Initial Proposals, we proposed that the period during which assets can be transferred should be aligned with the duration of the B-MPOLR obligation, recognising stakeholder concerns that possible "gaming" activities should be limited. We now believe that the shorter duration of the B-MPOLR is unlikely to afford other meter operators a sufficient length of time to decide whether to exit the traditional metering market. In addition, the slower roll-out of smart meters that suppliers are suggesting may in itself limit possible "gaming" in transferring asset portfolios as significant populations of traditional meters will not be displaced until later in the mass roll-out period. Given that retaining a larger portfolio for longer will also require NG to retain an appropriate workforce to maintain the levels of service customers require, we believe that this will partially mitigate the risk of late requests to adopt other portfolios. We also recognise that the asset transfer requirement is a function of the NMM obligation, which will continue to the end of mass roll-out. As a result, our Final Proposals now offer asset transfer to the end of the NMM obligation, based on the terms outlined previously.

⁶ A copy of the Asset Transfer Technical Requirements template can be found on our website at: <http://www.nationalgrid.com/uk/Metering/PricingConsultation/Documents>



3.4 Traditional domestic meter displacement rates

The effects of the smart meter roll-out can be simplified into two areas; premature displacement of traditional meters and potential ongoing service costs. Some assets, particularly those new and replacement meters yet to be installed under the POLR obligations, will have very short service lives. Displacement rates will also affect the duration and scale of the supporting services that are required to support these assets.

Our initial pricing model used three scenarios produced by DECC as part of their Smart Metering Programme Impact Assessment, with the Lower-bound case being used as the basis for our Initial Proposals. Although stakeholders generally agreed with the use of the DECC Lower-bound case, technical constraints, DCC implementation, property accessibility, cost and engineer availability were all cited as possible causes for delays to the mass roll-out. The latest supplier estimates issued in January 2013 by DECC Consumer Engagement and Roll-out Group (CERG) suggest that the mass roll-out of smart metering may be slower than even the original DECC Lower-bound case. Both stakeholders and Ofgem indicated that they would expect NG to review displacement rates used in the pricing model based on this latest information. Given the previous feedback received, and supporting industry analysis by such organisations as the National Skills Academy for Power⁷ regarding engineer resourcing and skilling, we agree that the latest displacement profile data may present a more credible basis for modelling than the DECC Lower-bound case used previously. However, despite having remodelled our pricing proposals to the latest supplier estimates, we believe NG remains exposed to a degree of both risk and cost if the actual roll-out varies significantly from these projections.

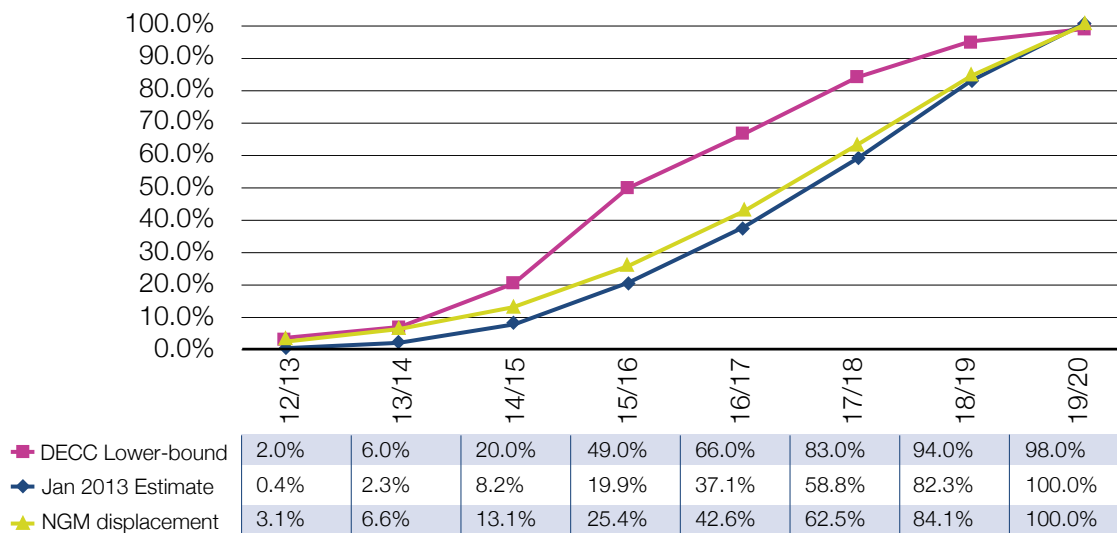
The latest supplier estimates for the pace of mass roll-out indicate completion by the end of 2019, in line with Government expectations that the majority of smart metering installations remains achievable by this date. We believe that the traditional meter displacement rates which NG will suffer in the earlier years may be greater than the national rate detailed in the latest estimates. NG meters are generally older than either the portfolios of the commercial meter operators, IDNs or independent gas transporters, affording a potential opportunity to displace these meters where fees for premature replacement are proportionally lower. We therefore believe this greater age profile could create an incentive for suppliers to displace NG meters more quickly than other populations.

End of life exchanges will still be required over and above smart displacement. We believe that our Holistic Asset Management (HAM) approach can assist in ensuring that management of workloads is effectively informed to ensure that the most vulnerable traditional installations are prioritised for exchange. As seen currently, we expect to see a continuation of the use of third-party agents to undertake this work on behalf of some suppliers, thereby further increasing attrition rates.

⁷ Workforce planning models supporting engineering resource requirements in the energy sector available via <http://www.power.nsapademy.co.uk/news-events/news/listen-smart-metering-workforce-planning-model-webinar>

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Figure 2 – Traditional meter displacement profile



Our Final Proposals are therefore based on the latest supplier smart roll-out estimates but we have adjusted the displacement profile to account for the factors described to more closely demonstrate the likely displacement rate which we believe NG meters are likely to suffer. Our pricing proposals reflect an assumption that suppliers will comply with the current mass roll-out end date of 2020 in achieving the transition to smart metering. We do, however, welcome industry suggestion that further clarification is provided on the nature of the licence wording seeking suppliers to demonstrate “all reasonable steps” in meeting smart roll-out targets. We recognise the bearing that this may have on overall displacement rates and the existence of any remaining traditional meter populations by 2020.

Our Final Proposals continue to assume that Domestic operational overheads associated with maintenance activities decline in line with average meter population, detailed further in Section 3.9. Stakeholders have stated differing views as to whether DCMs or PPMs will be displaced earlier so, on balance, we have continued to model a pro rata displacement rate in the absence of any firm evidence.

In our Initial Proposals, we outlined a potential pricing adjuster based on progress of the smart roll-out at the then mid-point in the programme, December 2016. We proposed that pricing should be reviewed where displacement rates were shown to have been markedly slower than the DECC Lower-bound case used as the basis for our pricing, with a 20% deviation from the cumulative completion rate triggering the

adjustment. To mitigate the revenue risks of displacement rates being faster than the Lower-bound case, we proposed addressing this by the inclusion of an element in the rate of return, recognising the asymmetrical risk to NG of faster displacement rates. In the event of the pricing adjustment being triggered, we proposed that rentals would be revised based on forecasts for the remaining period of the roll-out and any resulting over-recovery of revenues would be “given back” to customers.

We recognise that there remains uncertainty in forecasting the rate of smart meter roll-out due to such factors as the exact start date of the mass roll-out stage, DCC readiness to manage PPM requirements and concerns over data security across the proposed infrastructure, which may result in slower displacement rates. Whilst some stakeholders point to this continuing uncertainty, other stakeholders suggest a faster rate in the early years remains possible. We now believe that the use of the latest supplier smart roll-out estimates, demonstrating a significantly slower pace, effectively removes the requirement for a future adjustment of prices and for the element in the proposed rate of return addressing asymmetrical risk.

We do not believe that sufficient volumes of smart installations will have been achieved by December 2016 to enable a sensible assessment to be made of the need for any price adjustment. We would suggest that displacement rates will remain variable until well into the roll-out programme and that the risk that displacement could be either faster or slower than latest estimates remains realistic. We agree that the latest supplier roll-out estimates currently provide a credible basis on which to project traditional meter populations and accept that it is reasonable for us to accommodate any variations in this rate within our proposals. We do, however, continue to believe that it is appropriate to include a

smaller risk element in the rate of return relating to the management of a fluctuation in PPM displacement timings and back-office services relating to a “bubble” in smart-related activities. Although it appeared as a stakeholder proposal, we continue to believe that annual reassessments of tariffs introduce additional uncertainty to traditional metering and impose significant burdens on industry and regulatory resources that are disproportionate to any benefit.

We therefore now propose that the most appropriate approach would be to link any future review of traditional meter tariffs to future changes in the smart roll-out obligations. Thus, a pricing review would be reopened only in the event that a change is made in supplier licence conditions delaying the mass roll-out end to a date beyond December 2020.



3 Our final proposals



3.5 Regulatory Asset Value (RAV) assessment and allocation

In allocating the RAV between the Domestic and I&C businesses, Ofgem have stated that the right balance in reaching the appropriate levels of tariffs should be based on three objectives:

- Avoiding undue discrimination between Domestic and I&C customers
- Promotion of effective competition in the I&C market
- Facilitating the smart metering roll-out.

Ofgem suggested five different methods to apportion the RAV:

- 1) An allocation that preserves the current relationship between tariffs for Domestic and I&C metering services
- 2) A pro rata allocation of the 2012 metering RAV based on the current depreciated replacement cost values of the Domestic and I&C meters
- 3) A pro rata allocation of the 2002 metering RAV based on the depreciated replacement cost values of the Domestic and I&C assets in 2002, and rolled forward separately using the same depreciation and capitalisation policies adopted for the metering RAV as a whole
- 4) An I&C RAV consistent with the depreciated replacement cost value of I&C meters, taking into account realistic depreciation lives, leaving the residual RAV with Domestic
- 5) An allocation consistent with tariffs for I&C metering services being at a competitive level, neither too high to compete nor so low that competitors will be unable to compete, leaving the residual RAV with Domestic metering.

Stakeholders agreed over the general principle that any difference in valuation identified between the current total RAV and the estimated current value of metering assets should be apportioned

between the Domestic and I&C businesses when agreeing the RAV allocation. Concern was expressed regarding the use of RAV assessment as a basis of any regulation in the I&C sector and that this could in turn impact the development of competition.

Methodologies 2 or 3 offer the benefit of valuation of both the Domestic and I&C portfolios for the purpose of setting domestic tariff caps and also allocate any residual RAV on a pro rata basis. Methodology 2 is based on a more recent depreciated replacement cost exercise for I&C than that utilised for Methodology 3 and also recognises more clearly the differing paths that Domestic and I&C metering are likely to take in the future. Methodology 3 retains the link with historic treatment and regulatory precedence.

Given the current circumstances in which the gas metering market is operating, we believe that Methodology 2 is now the more relevant of the two and have therefore continued to use this as the basis for our Final Proposals. We have listened to stakeholders who would prefer U6 meters in non-domestic properties to be treated as I&C, so we have taken this into account in the RAV allocation and modelling detailed in our proposals. The RAV allocation based on Methodology 2 is £200m I&C and £677m Domestic following amendments made to the opening RAV to reflect latest estimates for the 2011/12 financial year.

Depreciated replacement costs

A bottom-up exercise to determine replacement costs was undertaken to support Methodology 2. Using a survey of all high pressure sites undertaken in 2011, an exercise was undertaken to group these sites (of which there are around 125) by capacity, pressure and complexity and to also look at what additional equipment was on site, such as pre-heaters and flow computers. Based on these groupings, quotes were obtained from a manufacturer and service providers to estimate replacement costs for these sites. Although replacement costs have not been determined by real procurements, we believe the figures obtained provide a fair basis for estimation of likely actual replacement costs. Meters and installation materials related to lower pressure sites are procured more regularly, so the calculations are based on actual cost data.

Labour and ancillary equipment costs for installation of domestic meters are based on latest cost information. Our Initial Proposals document based the cost for domestic meters on indexed historic meter costs rebased to 2011/12 values and based I&C on 2011/12 meter costs. This different approach was taken because the costs of procuring domestic size meters have varied significantly over time as a result of competition between manufacturers and between metering technologies. As such, the best current costs are significantly lower than the historic cost for domestic meters. The market for new I&C meters is much smaller and has not been subject to the same competitive pressures. However, we recognise that this created an inconsistent approach between the way Domestic and I&C meter costs were incorporated into the calculations, so have amended our approach to base calculations on the 2011/12 new meter costs for both Domestic and I&C replacement costs.

Asset life

Our Initial Proposals document assumed asset lives of 20 years for DCMs and 10 years for PPMs, consistent with standard industry assessment approaches and the charging methodology we have adopted historically. I&C meters were also assumed to have an asset life of 20 years but may have very different costs, particularly with respect to purchase price and maintenance costs. Rotary meters tend to have a higher purchase price than the equivalent turbine meter and both need to be serviced to manufacturer's specification, thus requiring more regular maintenance than diaphragm meters. Installations connected to high-pressure systems are considerably more complex and may require additional equipment such as flow computers, multi-stage pressure reduction, slam-shut discrimination and pre-heaters.

We have worked with Ofgem to undertake a review of asset lives to inform the depreciated replacement cost values. There is evidence that technically some of our domestic and I&C meters can last longer than the asset lives utilised for the Initial Proposals assessment of replacement cost detailed above. However, since a proportion of assets are also removed prior to achieving their assumed technical life, on average the expected technical life of a meter installed today for both Domestic and I&C does not differ significantly from the industry standards. The replacement cost analysis was however updated to recognise the potential value from meters that have already reached the average technical life.

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3.6 Rate of return

In 2002, the rate of return used was set at 7% pre-tax real, taking the 6.25% rate allowed for the gas distribution business and adding 0.75% to recognise the additional risks associated with the introduction of metering competition. In their July 2012 Decision document, Ofgem proposed that the same financial regulatory model should be used.

Tax treatment

Ofgem adopted a pre-tax approach to establishing an appropriate rate of return in the previous gas metering price control review of 2001. However, Ofgem have adopted a post-tax approach to calculating the cost of capital in price controls since the Developing Network Monopoly Price Controls consultation in 2003. The change, and the logic for it, was set out in Ofgem's Gas Distribution Price Control Review One Year Control Initial Proposals, dated September 2006⁸. They recognised that some network operators were likely to face increasing tax liabilities from the ending of accelerated capital allowances.

During the 2006 Transmission Price Control Review, Ofgem addressed a concern raised that transferring from a pre-tax to a post-tax basis would result in double funding of tax liabilities. In their document Transmission Price Control Review: Updated Proposals (TPCR)⁹, Ofgem reiterated their view that adjusting the tax allowance to reflect deferred tax from past periods would be inappropriate and would represent a re-opening of previous price controls. This position was also articulated in the 2006 Gas Distribution Price Control Review (GDPCR) One Year Control Final Proposals, confirming that it would not be appropriate to attempt to claw back tax benefits from previous years.

Our Initial Proposals estimated the revenue requirement on a pre-tax real basis. The preliminary revenue requirement took no account of actual tax cash outflows, but adjusted the rate of return to a pre-tax rate, based on latest corporation tax rates. In developing these Final Proposals, we have now undertaken further scrutiny of the rate of return following the final RIIO settlement and the adoption of the latest Supplier smart roll-out estimates to inform traditional meter displacement rates. This has shown that a pre-tax basis would not be sufficient to enable the domestic Metering business to finance its regulated activities to the end of the control period, given our future tax liabilities.

The revenue requirement is impacted both positively and negatively by tax treatment. It is increased due to the fact that the available level of capital allowances is well below the remaining Domestic RAV. Regulatory depreciation, which feeds through into revenue, is above the level of capital allowances utilised for tax purposes, causing most of the regulatory depreciation to be taxable. As a result, the projected amount of cash tax due (the post-tax approach) is well in excess of the level implicit in the pre-tax approach. However, it is also reduced by the mismatch between the timing of the remaining revenue and the utilisation of capital allowances. A key feature of the revenue requirement methodology

⁸ Ofgem's document Gas Distribution Price Control Review One Year Control Initial Proposals can be found at: <http://www.ofgem.gov.uk/Networks/GasDistr/GDPCR7-13/Documents1/15556-169a.pdf>

⁹ Ofgem's document Transmission Price Control Review: Updated Proposals can be found at: http://www.ofgem.gov.uk/Networks/Trans/Archive/TPCR4/ConsultationDecisionsResponses/Documents1/15578-170_06.pdf

Ofgem propose is that it seeks to recover the Domestic RAV over the period to 2020, driven by the transition to smart metering. No revenue is assumed to be recovered from domestic customers after this point. In contrast, the capital allowance pool will not cease in 2020 but is rolled forward indefinitely, using the reducing balance method and falling at a rate of 18% per annum. Therefore a pre-tax calculation would cease to take account of the value of any capital allowances we might expect to receive after 31 December 2020.

Utilisation of the NGG RIIO-GD1 rate enables the Metering rate of return to be based on an assessment of income in relation to costs which has already been subject to detailed regulatory assessment. It also considers at a macro level an appropriate return applicable for an extended charging period, such as a control review period. Our Final Proposals are therefore based on a rate of return that is consistent with the outcome of the RIIO consultation process, which is 4.24% Vanilla WACC, a post-tax, real rate of return. The revenue requirement has also been amended to include tax cash outflows in order to maintain consistency with RIIO methodology, instead of converting to a pre-tax rate.

Given that Ofgem moved to a post-tax approach from 2003 and a post-tax basis was used to calculate the rate of return for the rest of the NGG business in the RIIO-GD1 settlement, we believe it is appropriate for a post-tax treatment to be utilised here. A copy of the more detailed paper we have submitted to Ofgem regarding this matter can be found on our website¹⁰.

We recognise that the transition from a pre-tax to a post-tax treatment represents a change from

our Initial Proposals and that the materiality of this change on the overall revenue requirement is substantial. In the event that a pre-tax treatment continued to be utilised, however, we believe it would be necessary to revise several aspects of our pricing model in order to sufficiently fund the Domestic Metering business, rather than simply converting the RIIO-GD1 post-tax real rate of 4.24% to a pre-tax real equivalent. We believe that such a degree of revision would necessitate additional consultation.

We believe our Final Proposals represent a balance of interests in that we propose to lower tariff caps from their present level while enabling the business to recover its costs and at the same time facilitating the Smart meter roll-out.

Risk element

We continue to believe that a risk element remains appropriate, recognising the uncertainties inherent in the pace of the roll-out of smart meters and the significant impact that changes outside our control may have on our business. In our Initial Proposals, we addressed the risk of any deviation from the DECC Lower-bound case using two mechanisms. An element of 0.51% was included in the risk element to recognise the potential for an accelerated displacement rate and a later pricing adjuster proposed in the event of a slower displacement rate.

The latest supplier smart roll-out completion estimates support previous feedback received that traditional displacement rates may be slower than the DECC Lower-bound case, such that we no longer feel it is necessary to retain an item in the risk element to address a faster displacement rate. We have therefore removed 0.51% from our calculation of the proposed rate of return. We do,

¹⁰ A copy of the paper 'Why the RoMA tariff caps should be calculated post-tax' can be found on our website at: <http://www.nationalgrid.com/uk/Metering/PricingConsultation/Documents>

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however, continue to recognise the possibility that additional costs could be incurred if PPM displacement is slower than DCM displacement. Peaks in call and query volumes due to varying stakeholder strategies could also result in additional costs. We have not directly factored these costs into our financial model, given the uncertainty in assessing either the extent or exact timing of these, but believe that there is a real risk

of them being incurred. As a result, we propose that these should continue to be addressed in the risk element. A breakdown of the proposed risk element and the constituent items discussed is shown below:

Table 1 – The risk element of 0.18% outlined above, added to the underlying rate of return of 4.24%, provides a proposed rate of return of 4.42%.

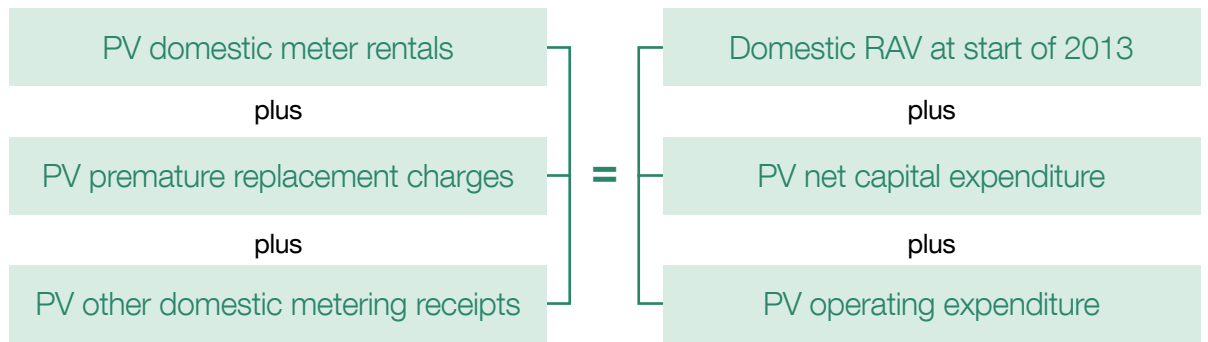
	Impact on DCM Tariff Cap	Probability of occurrence	Adjusted impact on DCM Cap	Risk element required
PPM displacement slower than credit meter displacement	£0.17	50%	£0.09	0.15%
Peaks in Smart roll-out caused by varying stakeholder strategies, driving additional costs related to call and queries volumes	£0.03	50%	£0.015	0.03%
TOTAL				0.18%



3.7 Domestic revenue requirement

Ofgem’s RoMA Decision document set out the Domestic revenue requirement equation that should be used for the pricing consultation:

Figure 3 – Domestic revenue requirement equation



The total revenue requirement is based on the opening RAV plus the Present Value (PV) of Operating Expenditure (OPEX), tax and Capital Expenditure (CAPEX) for the review period (tax was not shown separately in Ofgem’s document but it was implicit in discount rates applied to obtain present values). For NGG, the revenue requirement will be met by meter rentals, premature replacement charges (PRCs) and other

receipts in the form of upfront transactional charges for new installations and exchanges.

Our Final Proposals are now based on the latest supplier estimate profile for smart roll-out and RAV allocation Methodology 2. Our expectation of the Domestic revenue requirement, is outlined in the table shown overleaf:

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Table 2 – Domestic revenue requirement equation

£m*	2013/14	14/15	15/16	16/17	17/18	18/19	19/20	Total
OPEX	34	30	27	23	17	11	6	148
CAPEX	37	20	11	7	5	2	1	84
Tax	34	30	31	28	22	15	-9	152
PV of OPEX and CAPEX	102	76	62	50	36	22	-1	348
RAV as at 1st April 2013								677
Total revenue requirement								1,024

£m*	2013/14	14/15	15/16	16/17	17/18	18/19	19/20	Total
Meter rentals	225	214	192	157	113	63	19	983
PRCs	7	13	23	30	32	31	21	157
Other receipts	6	2	-	-	-	-	-	8
PV of income	234	214	193	160	119	75	30	1,024

*All shown at 2011/12 equivalent costs.

Proposed tariff caps (shown at 2012/13 equivalent prices)

	Proposed	Current	Variance
Domestic credit meter rental per annum	£15.38	£16.07	-£0.69
Prepayment meter rental per annum	£37.49	£37.49	£0.00
Customer requested exchange transactional charge	£76.42	£65.73	£10.69

In these Final Proposals, our summary revenue requirement analysis and supporting information provides historical information relating to costs, plus projections for the period from April 2013 to March 2020. It continues to assume that PPM and DCM displacement will be spread proportionally across the overall meter population and that maintenance activities decline in line with these volumes. Operational overheads are also assumed to decline in line with overall meter populations. Central costs attributable to Domestic metering are set out in Section 3.11, along with our projections for capital expenditure.

Generally, stakeholders support our approach of linking projections for future workload and operational overheads to traditional meter displacement rates. We continue to utilise this approach but now base displacement rates on the latest supplier smart roll-out estimates rather than the DECC Lower-bound case. Ofgem have been provided with a more detailed financial model but as this contains sensitive commercial information, it will not be shared with other stakeholders.

Customers expect NGM to continue to deliver against current service levels which means that systems and business processes must be maintained. We believe significant expenditure

on our IS infrastructure is necessary in 2013/14 to facilitate mobilisation of a new meterwork service provider and to ensure that the IS system is fit to last until 2020, enabling operational costs to be reduced in future years. Projections do not include 'one-off' allowances for specific changes to industry data flows or processes or decommissioning costs, required once the transition to smart metering is complete.

Previously, some stakeholders expressed concern over the impact that the inclusion of PRCs has on the six box model, given the variable nature of these payments and the number of MSA signatories. For clarity, the calculation only takes into account the New and Replacement MSA contract which covers approximately 21% of the portfolio. Ofgem requested that the income from this contract be taken into consideration in order to include revenues from PRCs, thus ensuring more revenue was not collected than required overall. We accept that this is appropriate for NGG in considering future tariff caps and confirm that any impact of suppliers signing the alternative domestic legacy contract is excluded from this calculation.

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3.8 Transactional workloads and requirements for other services

Our Final Proposals retain the link with the traditional portfolio in determining workloads and services required.

We continue to expect Policy Meter Exchanges (PME), regulator replacements and customer-requested volumes to reduce in the years to 2015 as more gas suppliers perform their own exchanges to undertake smart installations, particularly after the smart mandate takes effect. However, given the slower smart installation rates that the latest roll-out projections suggest, we believe PME workloads may reduce less rapidly than previously estimated. This will result in a greater number of policy exchanges being required before the smart roll-out pace accelerates and a proportionate increase in CAPEX provisions. We believe that our Holistic Asset Management (HAM) approach can assist in ensuring that the potential increase in PME workloads is effectively directed to ensure that the most vulnerable traditional installations are prioritised for exchange.

Consultation responses confirmed that stakeholders value the range of other services we currently provide, such as query investigation, responding to complaints and a national call handling service for both domestic and I&C communities. Stakeholders also confirmed that they expect us to maintain the same high standards of support services throughout the transition to smart metering, able to accommodate any “bubbles” of queries and complaints that could be created. The latest supplier estimates of the pace of smart roll-out suggest that we will need to retain a larger workforce within our business for longer. We have therefore accommodated this within our pricing model, utilising the same relationship between operational costs and meter populations to determine the costs to deliver the services required.



3.9 Meter maintenance

As the licensee, it remains NGG's responsibility to ensure that a meter is maintained to an appropriate standard and the installation remains safe and fit for purpose.

Our pricing model contains an expectation of the level of activity and costs of maintaining the estimated volumes of traditional meters prior to displacement. We expect costs related to maintenance and asset management activities to fall largely in line with meter populations, with a significant proportion of these costs relating to attending to PPMs. Our pricing model does not include any additional volumes which may be required following asset transfer.

Given our decision to base traditional meter displacement rates on the latest supplier estimates of smart meter roll-out completion, we have altered our projections of meter maintenance volumes to recognise the greater volumes of traditional meters that will exist in the early years of the roll-out. Our Final Proposals therefore continue to be based on the same

relationship between meter populations and instances of maintenance which we utilised in our Initial Proposals but are now assessed against a traditional meter population remaining in situ for longer.

We accept that the later displacement of PPMs could result in greater volumes of maintenance activity, as stated by some stakeholders. An alternative view has also been presented by another stakeholder suggesting that the ability to offer smart prepayment may result in suppliers seeking to displace PPMs upon call-out, a service some suppliers might shortly be in a position to offer. On balance, therefore, we continue to assume a similar ratio of PPM maintenance volumes to the overall PPM population that we undertake today, and to assume a pro rata displacement of DCMs and PPMs.



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3.10 Post Emergency Metering Services (PEMS)

Our Final Proposals regarding PEMS remain consistent with those previously outlined in our Initial Proposals document.

At present, NG do not intend to offer smart meter installation or to undertake PEMS services for these but we continue to recognise the importance of maintaining services for remaining traditional installations. NGG will therefore continue to offer traditional PEMS services in their four distribution network areas on a commercial basis, as we do today. Traditional meters installed through PEMS activity will be adopted by the NMM using the same valuation mechanism as for asset transfers and subject to similar regulatory tariffs for ongoing charges.

We acknowledge concerns raised by several stakeholders regarding arrangements for PEMS services after the mass roll-out of smart metering is mandated, or where a smart meter has already been installed at a property. We continue to believe that the issue of ensuring appropriate arrangements for PEMS services in instances of smart installations to maintain continuity of smart services remains the responsibility of the supplier.

We strongly support the need to ensure the safety of a consumer's supply and therefore recognise that there may be circumstances where the installation of a traditional meter will be required in order to quickly restore gas supply. Gas suppliers will continue to remain free to choose to despatch their own preferred meter provider or to instruct the network operator to undertake the meter exchange. Following the start of the smart metering mandate, we therefore continue to expect suppliers to make the decision regarding who to instruct to undertake this work based on their readiness to install smart meters in emergency situations.



3.11 OPEX, CAPEX and Workload projections

Our Final Proposals are largely based on 2011/12 costs for Domestic metering activities, projected forward in line with populations and workload.

Our approach assumes that all operational costs are variable and can be eliminated in direct proportion to reductions in work requests or meter populations. In reality, costs will likely be stepped, with a time lag between workload or meter population reductions and the resulting lowering of costs.

Using RAV allocation Methodology 2 and our revised displacement profile based on the latest supplier smart roll-out estimates, the table below summarise our expectations regarding workload,

OPEX and CAPEX based on the revenue requirement equation detailed in Section 3.7. We have used a rate of return of 4.42%, with 4.24% based on the RIIO-GD1 settlement and an additional 0.18% in respect of metering risk. The OPEX and CAPEX graphs are based on meter populations derived from the displacement profile detailed in Section 3.4 and provide historical information relating to costs, plus projections for the period from April 2013 to March 2020, together with the assumptions or approach against which they have been derived.

Table 3 – Workload and OPEX projections

Workload/populations	13/14	14/15	15/16	16/17	17/18	18/19	19/20	Total
Install/Exchange volumes (000s)	243	104	48	19	13	8	5	
Average populations (000s)*	13,795	13,071	11,703	9,566	6,884	3,870	1,150	
OPEX £ms								
Operational overheads – installs/exchanges	2.6	1.1	0.5	0.2	0.1	0.1	0.1	4.6
Operational overheads – ongoing	8.7	8.4	7.5	6.2	4.4	2.5	0.7	38.5
Meterwork costs – ongoing	13.4	12.9	11.6	9.5	6.8	3.8	1.1	59.2
Property	2.2	2.2	2.1	2.1	1.5	1.1	1.1	12.2
IS	3.3	2.8	2.6	2.6	1.9	1.8	1.8	16.7
Finance, Regulation, Safety, HR etc	3.9	3.1	2.5	2.4	1.9	1.5	1.5	16.8
Total	34.0	30.5	26.8	22.9	16.8	10.8	6.2	148.0

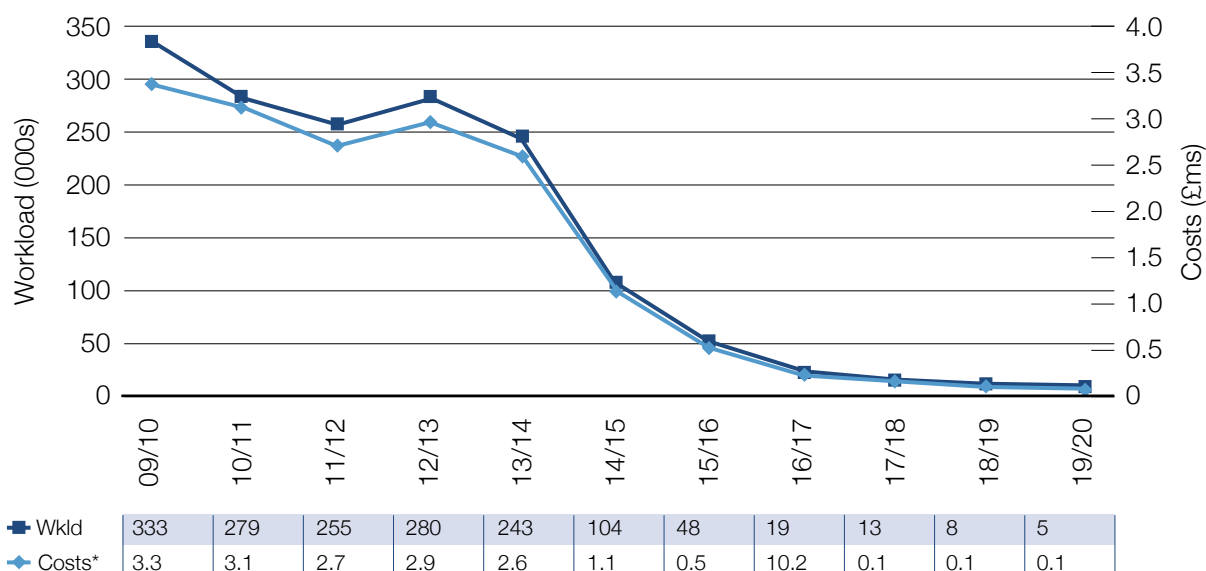
* Populations and costs exclude U6 meters in commercial properties. All costs shown at 2011/12 equivalent rates.

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Table 4 – CAPEX projections

CAPEX £ms								
CAPEX related to installs/ exchange	27.4	12.1	5.5	2.4	1.5	0.8	0.5	50.1
Regulator exchanges	5.6	5.3	4.8	3.9	2.8	1.6	0.5	24.5
PEMS meter adoptions	1.7	1.4	1.1	0.6	0.2	0.0	-	5.1
IS system investment	2.3	1.5	0.1	-	0.2	-	-	4.1
Total	37.0	20.3	11.5	6.9	4.7	2.4	0.9	83.8

Figure 4 – Operational overheads – related to installations/exchanges

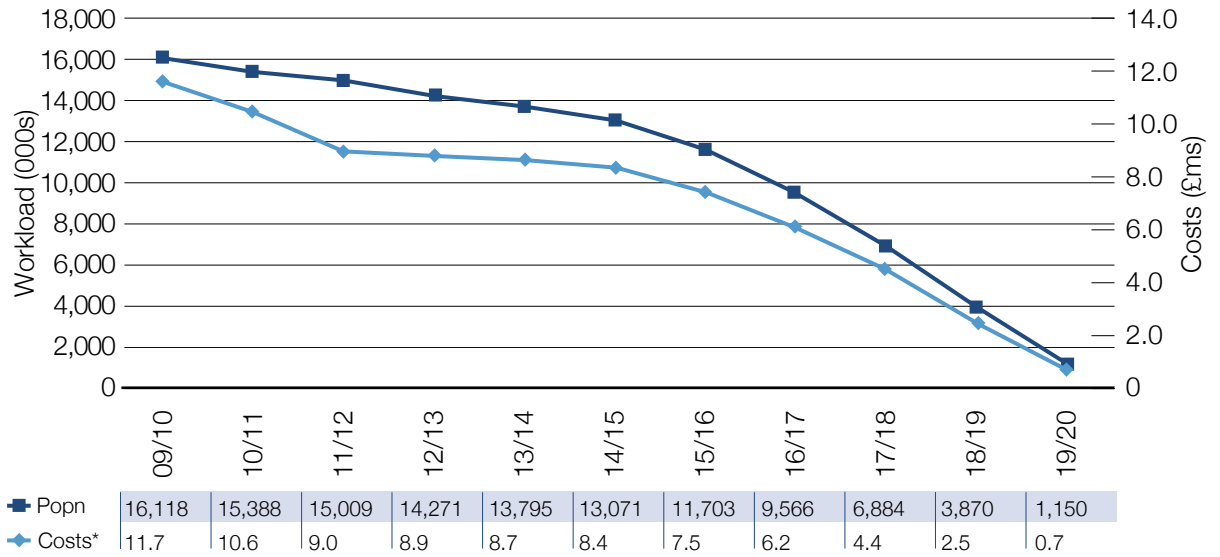


*All costs shown at 2011/12 equivalent

Installation volumes are forecast to be slightly higher in 2012/13 compared to 2011/12, mainly due to additional PME volumes carried over from 2011/12. Workload is expected to reduce from 2013/14 onwards as the smart roll-out accelerates. Included in the modelling period (April 2013 to March 2020) are an estimated

61,000 meters which we expect to install under the MPOLR/NMM obligations and the remainder under the New and Replacement MSA agreement. Our pricing model assumes that operational overheads associated with meter installations reduce in line with workload.

Figure 5 – Operational overheads – ongoing



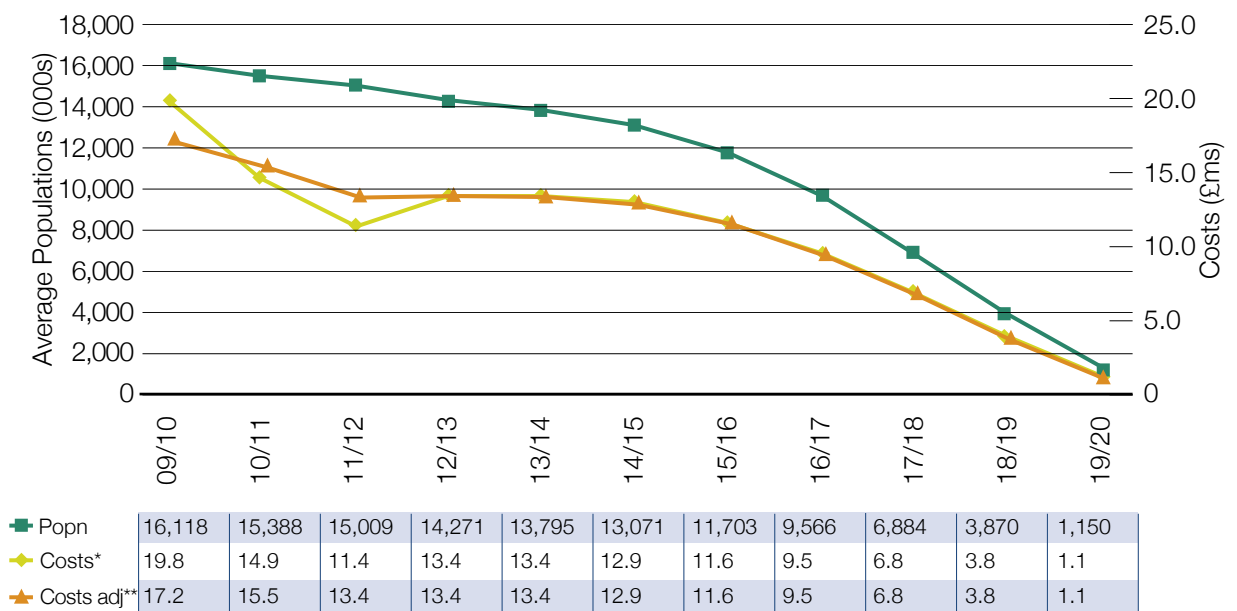
*All costs shown at 2011/12 equivalent – populations and costs exclude U6 meters in I&C properties

Our pricing model assumes that displacement of traditional meters driven by the smart roll-out will be spread proportionally across DCM and PPM populations. Our model assumes that operational overheads associated with maintenance activities decline in line with

average meter populations. There is a small mix impact due to proportionally more PPMs being installed than DCMs over the period, particularly during the B-MPOLR obligation, given that PPMs require more maintenance than DCMs.

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Figure 6 – Meterwork costs – ongoing



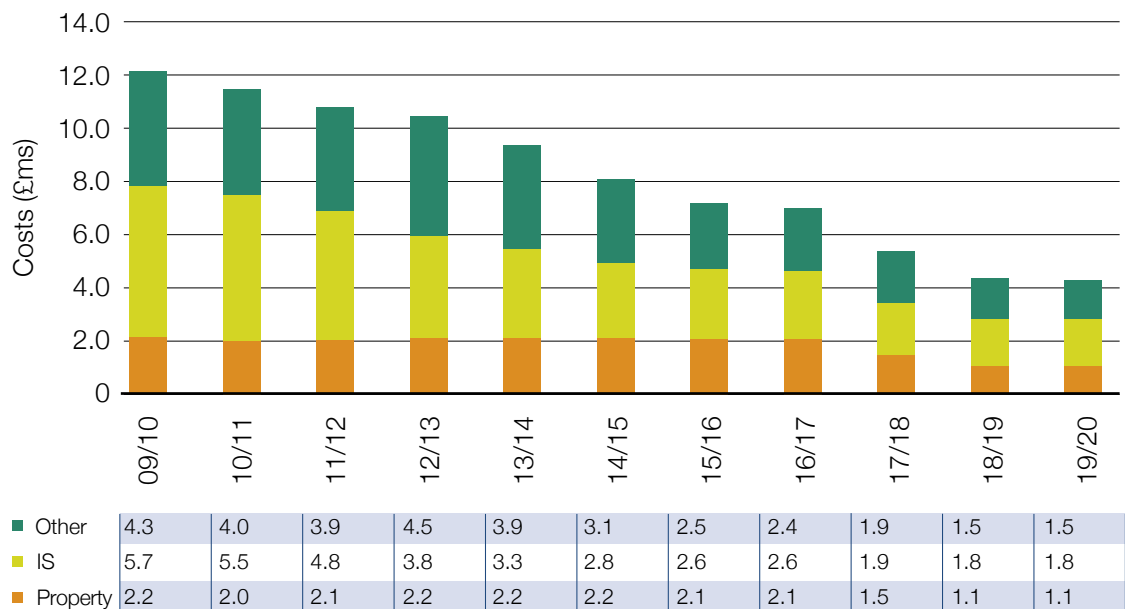
**All costs shown at 2011/12 equivalent – populations and costs exclude U6 meters in I&C properties

** Adjusted costs take the average attend to costs for three-year period to 2011/12 then adjusted for population volumes (to remove the weather-related fluctuations in the actuals)

Ongoing meterwork costs related to maintenance and asset management activities are forecast to fall largely in line with domestic meter populations. An adjustment has been made to rebase the 2012/13 figure for PPM Attend To visits, rather than extrapolating the 2011/12 figure. This is due to the particularly mild winter experienced in 2011/12 that meant the ratio of

Attend To visits seen in this year was much lower than in any year historically. The 2012/13 figure is rebased to take the average ratio of Attend To visits for the three-year period ending 31 March 2012, and this ratio is extrapolated forward in line with PPM populations. There is a small mix impact due to proportionally more PPMs being installed than DCMs.

Figure 7 – Central costs



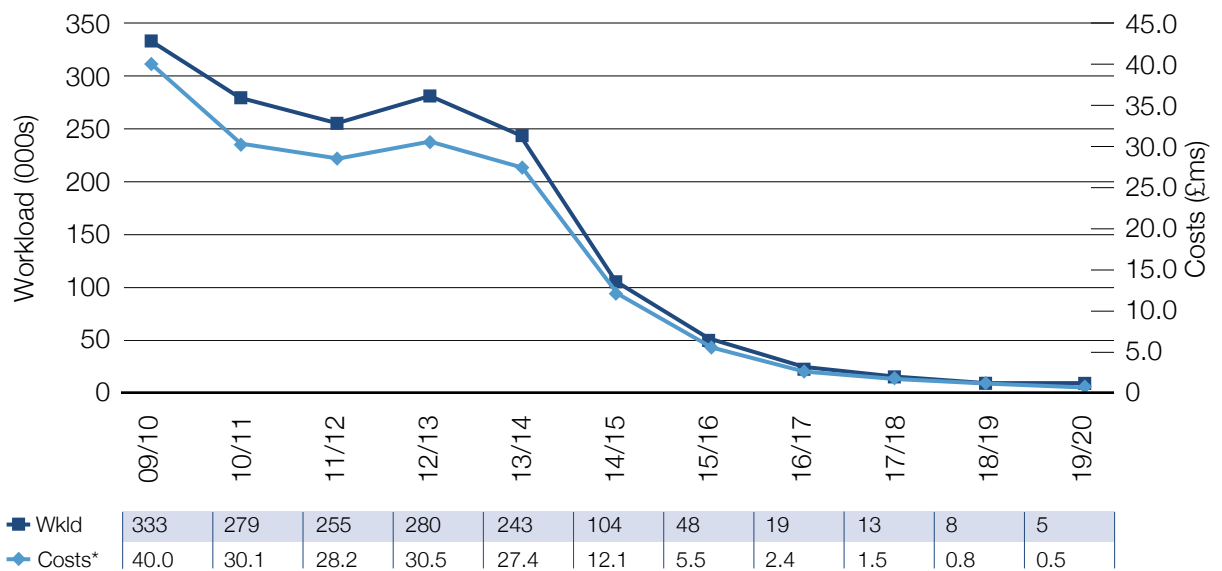
Central overheads attributable to domestic metering will continue to reduce until 2019/20. These largely consist of property, IS costs and support functions such as Finance, Billing, Change Management, HSE and Regulation. Due to the nature of these costs, they are not variable and are generally not driven by workload or populations. Our pricing model assumes that

these costs will be reduced and property costs rationalised wherever possible, with central costs more than halving over the period. The slight increase in 'Other' costs in 2012/13 is mainly related to additional project resource. IS decommissioning costs will be required once the smart roll-out is complete but has not been included in this projection.

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CAPEX

Figure 8 – Capital expenditure – related to installations/exchanges

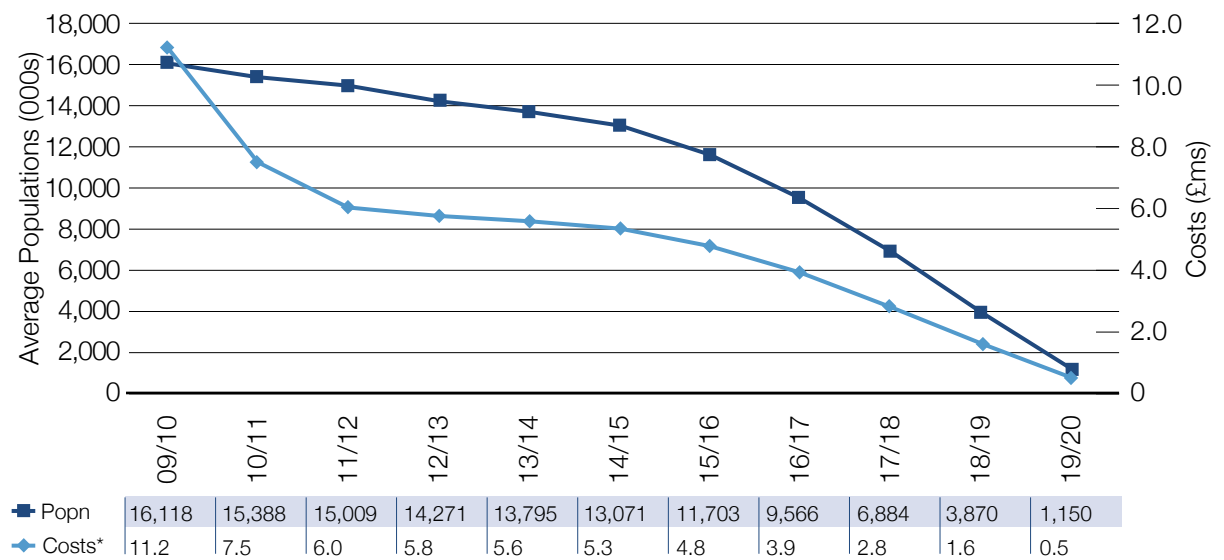


*All costs shown at 2011/12 equivalent

Capital expenditure relating to domestic meter installations, such as the meter, associated kit and labour costs, are assumed to decline in line with workload volumes but we still expect to undertake a significant amount of work to install new meters prior to the smart mandate taking effect. There will still be some traditional meter exchanges due to customer-requested change of functionality, PPM fault exchanges, potential

DCM policy exchanges where there is a potential health and safety risk or where end of life replacement is required. Our Final Proposals therefore recognise the fact that traditional meter displacement will be slower in the early years of the mass roll-out period, resulting in a larger population of traditional meters subject to a requirement to exchange for these reasons prior to displacement.

Figure 9 – Capital expenditure – regulator replacements



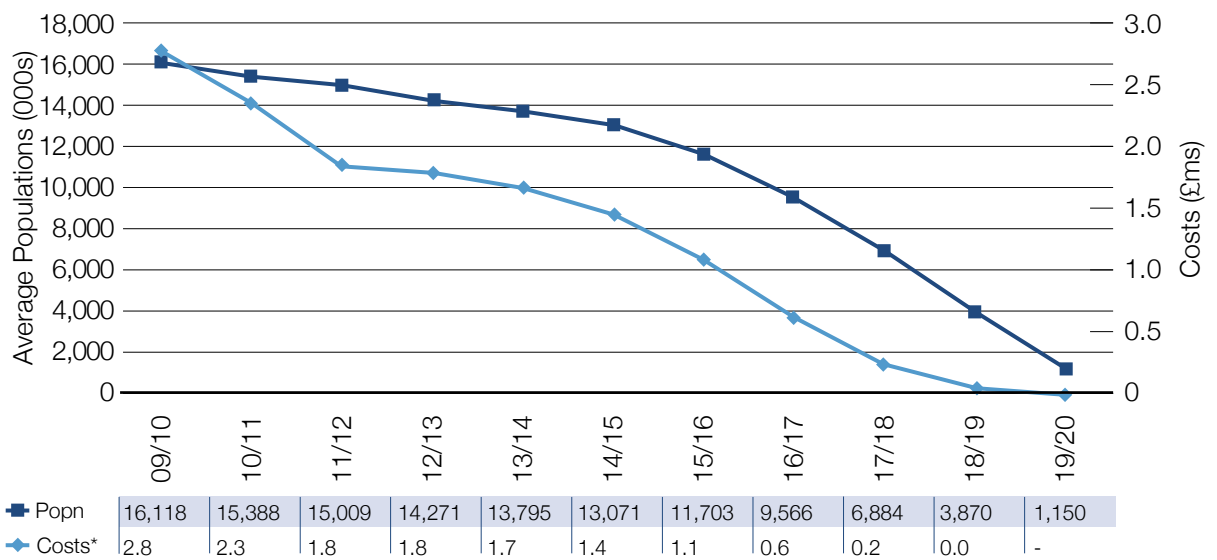
*All costs shown at 2011/12 equivalent

Our policy, agreed with HSE, is to replace whenever found certain types of pressure regulator that do not comply with current industry standards. The work is undertaken by gas transporters' operatives when carrying out other work unrelated to the meter, then recharged to NGM. Replacements are also undertaken when

found as part of a meter maintenance visit. Although the policy to undertake such replacements will persist, we have assumed that the number of replacements undertaken will decline over the smart roll-out period, in line with traditional meter populations, as the associated traditional regulators are also replaced.

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Figure 10 – Capital expenditure – PEMS meter adoptions

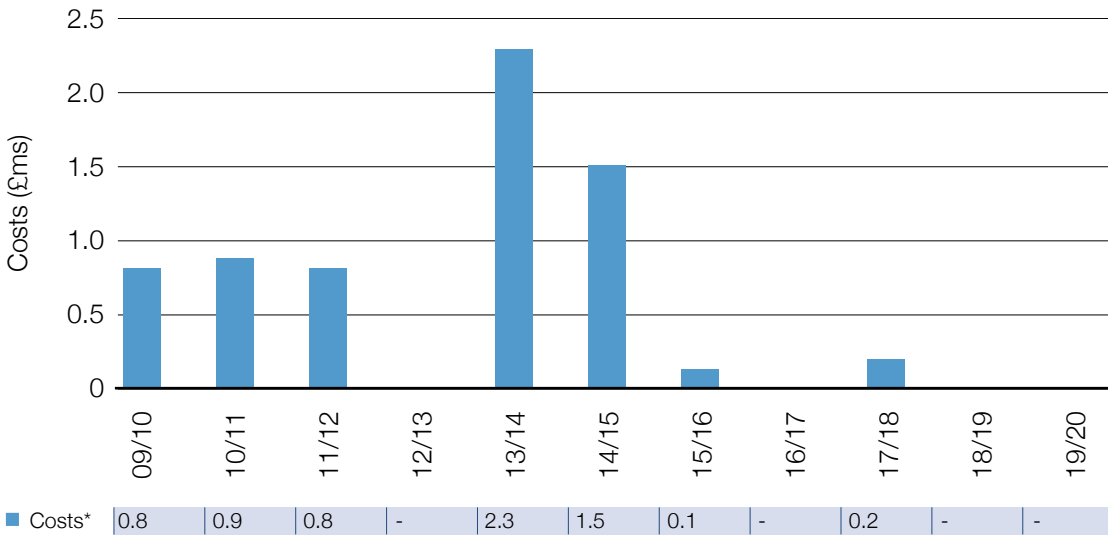


*All costs shown at 2011/12 equivalent

We continue to assume that the adoption of PEMS meters will decline in line with average meter populations but, in light of the revised displacement profile used, the volumes may continue at a higher rate for longer than previously anticipated. In light of the continuing uncertainty regarding smart PEMS arrangements, we continue to base our modelling on the

traditional meter population in situ, given that we believe the priority in these instances will be to quickly restore gas supply. However, we accept that the need for adoption of PEMS meters may decline earlier than the reduction in traditional meter populations in the event that mechanisms for the delivery of smart PEMS arrangements are readily available.

Figure 11 – Capital expenditure – IS



*All costs shown at 2011/12 equivalent

Investment in IS infrastructure remains necessary to optimise current systems for domestic metering and ensure they remain fit for purpose for the duration of any remaining traditional meter asset lives. The latest Supplier smart roll-out estimates underpin this view, given the larger population of traditional meters which are now likely to remain in situ for longer when extrapolated from these displacement projections. Significant expenditure is necessary

in 2013/14 to facilitate the mobilisation of a new Domestic meterwork service provider and to undertake essential upgrades of aged IS infrastructure to ensure the system is fit to last until 2020. In line with our previous proposals, we have not included any allowance for specific changes to industry data flows in our cost projections and would expect any such requirements to be undertaken at additional cost.

4 Next steps



4.1 Implementation of new obligations and tariff caps

Following receipt of our Final Proposals, Ofgem will issue a Decision document regarding their findings and undertake a further period of industry consultation.

In the event that Ofgem consents to the proposals they will then progress the licence changes necessary to implement the B-MPOLR and NMM obligations, followed by the required implementation or “stand still” period of 56 days.

As a result, we expect the B-MPOLR and NMM obligations to take effect in December 2013 or January 2014. Any changes to tariff caps resulting from the consultation process will also take effect at this time.





4.2. Contact us

Thank you for taking the time to read this document. If you have any further questions regarding this document, our pricing approach or any other aspect of our stakeholder consultation activities, please let us know. This document is also available on our website.

Email us:

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Write to us:

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35 Homer Road, Solihull B91 3QJ

Call us:

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0121 424 8397
Kirsty Scott
(Pricing Consultation Co-ordinator)
0121 424 8518

Our website:

[http://www.nationalgrid.com/uk/Metering/
PricingConsultation/Documents](http://www.nationalgrid.com/uk/Metering/PricingConsultation/Documents)



4.3. Alternative formats

This document can be made available in large print if required. Please contact us to request a copy.



4.4. Further information

If you would like further information about National Grid, its Metering business, please do not hesitate to contact us by email or visit www.nationalgrid.com

Appendix 1 – Stakeholder organisations

Stakeholder group	Organisations
Commercial Meter Operator / Provider	Calvin Asset Management Energy Assets Limited Exoteric Gas Solutions Macquarie Bank Ltd Smart Meter Solutions (SMS)
Consumer Groups	Citizens Advice Bureau Consumer Focus Energy Saving Trust National Energy Action (NEA) Which?
Energy Ombudsman	Ombudsman Services
Gas Suppliers	Better Energy Supply Ltd BP Gas British Gas Business Energy Solutions Contract Natural Gas Cooperative Energy Ltd Corona Crown Energy Dong Economy Gas EDF Energy ENI EON First Utility Gas Plus Supply Ltd Gazprom GDF Suez Sales Ltd Good Energy JP Morgan Npower Opus Energy OVO Gas Ltd Regent Gas Ltd Scottish Power Smartest Energy Ltd Social Ventures in Energy Ltd Spark Energy SSE Statoil The Renewable Energy Company

Gas Suppliers	Total Gas & Power UK Healthcare Corporation Ltd Utilita Vayu Ltd Warwick Gas Wingas
Government	DECC Fuel Poverty Advisory Group Local Authorities National Measurement Office
Health & Safety Executive (HSE)	HSE
Independent Distribution Networks (IDN)	Northern Gas Networks (NGN) Scotia Gas Networks (SGN) Wales & West Utilities (WWU)
Independent Gas Transporters (IGT)	AIGT – Association of Independent Gas Transporters E.S. Pipelines Ltd Energetics Gas Ltd Fulcrum Pipelines Ltd GTC Pipelines Ltd Independent Pipelines Ltd
Industry Groups	AMO (Association of Meter Operators) Energy UK EUA – Energy & Utilities Alliance (SBGI Utility Networks) Gemserv IGem Supply Point Administration Agreement (SPAA)
National Grid Gas	National Grid Gas – MARC
Ofgem	Ofgem
Pension Fund Trustees	National Grid Electricity Group of the Electricity Supply Pension Scheme National Grid UK Pension Scheme (Defined Benefit/Defined Contribution)
Supply Chain Partners	G4S Utility and Outsourcing Services (UK) Ltd GL Denton PH Jones Metering Services Ltd Various Meter Manufacturers

Appendix 2 – Glossary

AMR – Automated Meter Reading

Metering functionality for the non-domestic sector that offers remote data collection and consumption tracking but does not require an integral valve and In-Home Display like a fully “smart” meter.

B-MPOLR – Backstop Meter Provider of Last Resort

An obligation placed in a single entity’s Gas Transportation Licence to meet any reasonable request by a Distribution network or supplier to provide and install at the premises of a domestic customer a gas meter owned by the licensee and of a type specified by the Distribution network or supplier. The B-MPOLR obligation operates in conjunction with the MPOLR obligation in other Gas Transportation Licences to provide this service.

CAPEX – Capital Expenditure

Funds used by a company to acquire or upgrade physical assets such as property, industrial buildings or equipment. This type of outlay is made by companies to maintain or increase the scope of their operations.

Consumer

A person or organisation using gas at a meter point.

Customer

A person or organisation with whom NGM has entered into a contractual arrangement.

DCC – Data Communications Company

New proposed entity which will be created and licensed to deliver central data and communications activities. DCC would be responsible for managing the procurement and contract management of data and communications services that will underpin the smart metering system.

DCM – Domestic Credit Meter

A standard domestic meter which registers gas consumption.

DECC - Department of Energy and Climate Change

HAM – Holistic Asset Management

A holistic view of the entire metering installation used when identifying PME work pools. The principle considers the entire risk presented to the individual household resulting from the operation of the assets within the installation, as a consequence of (but not limited to) the propensity for corrosion, visit history, asset functionality and meter accuracy.

IDN – Independent Distribution Networks

MAM – Meter Asset Manager

A person or organisation approved by the Authority as possessing sufficient expertise to provide gas metering services.

Metering services

The provision, installation, commissioning, inspection, repairing, alteration, repositioning, removal, renewal and maintenance of the whole or part of an installed gas meter.

MPOLR – Meter Provider of Last Resort

An obligation in the Gas Transportation Licences to meet any reasonable request by a Distribution network or supplier to provide and install at the premises of a domestic customer a gas meter owned by the licensee and of a type specified by the Distribution network or supplier.

NMM – National Metering Manager

An organisation obligated by their Gas Transportation Licence to provide B-MPOLR services on a national basis until the MPOLR obligation falls away. In addition the NMM will be obliged to maintain traditional meters until the end of the smart meter roll-out and to offer terms for the adoption of meters from other parties.

OAMI – Ofgem Approved Meter Installer

Registered entities that conform to one or more of the codes of practice in relation to meter installation.

OPEX – Operating Expenditure

Expenditure that a business incurs as a result of performing its normal business operations.

PEMS – Post Emergency Metering Services

Repair or replacement of a gas meter as a result of a gas emergency occurring.

PME – Policy Meter Exchange

A programme of work to replace assets that are deemed to have reached the end of their asset life due to condition or accuracy.

PPM – Prepayment Meter

A domestic gas meter which requires payment for gas to be made in advance of use or they will prevent the supply of gas. Advance payment is made by means of electronic tokens, keys or cards inserted into the meter.

PRC – Premature Replacement Charge

An additional payment becoming due in the event of the early removal of a meter prior to the end of its anticipated life. The payment is in addition to rental charges but exception criteria may apply.

RAV – Regulatory Asset Value

The RAV is a measure of the value of the capital employed in the regulated business. RAV is a financial construct based on historical investment costs. It represents the value upon which companies earn a return in accordance with the regulatory cost of capital and receive a regulatory depreciation allowance.

RIIO-GD1

Ofgem's revised approach to the regulation of energy networks, replacing the previous RPI-X approach. The acronym RIIO stands for Revenue = Incentives + Innovation + Outputs. The first price control period for the gas Distribution networks will run from 01 April 2013 to 31 March 2021.

RoMA – Review of Metering Arrangements

The Ofgem consultation process regarding the regulatory arrangements for managing the transition from traditional meters to smart meters.

WACC – Weighted Average Cost of Capital

A calculation of a business's cost of capital in which each category of capital is proportionately weighted to determine the average cost of sources of finance and therefore overall required return.

Notes