

RP6 Draft Determination

Annex N

Metering

About the Utility Regulator

The Utility Regulator is the independent non-ministerial government department responsible for regulating Northern Ireland's electricity, gas, water and sewerage industries, to promote the short and long-term interests of consumers.

We are not a policy-making department of government, but we make sure that the energy and water utility industries in Northern Ireland are regulated and developed within ministerial policy as set out in our statutory duties.

We are governed by a Board of Directors and are accountable to the Northern Ireland Assembly through financial and annual reporting obligations.

We are based at Queens House in the centre of Belfast. The Chief Executive leads a management team of directors representing each of the key functional areas in the organisation: Corporate Affairs; Electricity; Gas; Retail and Social; and Water. The staff team includes economists, engineers, accountants, utility specialists, legal advisors and administration professionals.

Our Mission

Value and sustainability in energy and water.

Our Vision

We will make a difference for consumers by listening, innovating and leading.

Our Values

Be a best practice regulator: transparent, consistent, proportional, accountable, and targeted.

Be a united team.

Be collaborative and co-operative.

Be professional.

Listen and explain.

Make a difference.

Act with integrity.

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1 Introduction

- 1.1 NIE Networks (NIEN) submission for metering services is contained within their Market Operations Business Plan. The submission covers activities relating to the Meter Installs/Changes and Meter Recertification programmes, meter reading and other operating costs and overheads, such as IT, HR and finance costs, which have been allocated to metering.
- 1.2 The Market Operations Business Plan also refers to 'Other costs' which relate to Transactional and Revenue Protection Services. Transactional Services refers to the provision by NIEN of services to suppliers in support of the competitive retail market. Revenue Protection Services refers to NIEN's activities to detect and deter cases of illegal abstraction of electricity (i.e. electricity theft) and to assist suppliers in relation to that illegal abstraction. As these incidents are largely related to electricity theft from meter tampering we have considered Revenue Protection within this metering section.
- 1.3 NIEN's submission and UR's proposed draft determination for the costs relating to these activities are set out in Table 1. All figures have been provided in 2015/16 prices unless otherwise stated. Productivity factors have not been applied to the figures presented. However productivity factors will be applied across all of the costs within the UR's financial model.
- 1.4 As detailed in the approach section we have used figures from the Regulatory Instructions and Guidance for Business Plan Submissions (RIGS) in our assessment. However work areas within the RIGS are recorded differently than the work areas presented in NIEN's submission. For example IT, HR and finance costs are classified as 'Metering Overheads' within the RIGS whereas NIEN have submitted these work areas separately in their Market Operations Business Plan
- 1.5 We have adopted the work areas as presented in the RIGS as this has formed the basis of our analysis and align with the UR's and NIEN's financial models. However where possible we have compared NIEN's Business Case submission with UR's draft determination to allow a comparison.
- 1.6 For future work, following the price control, NIEN should align the various information sources that have been submitted. This will promote further transparency and ease of comparison between the RIGS, Market Operations Business Plan submission, and UR and NIEN financial models.

Table 1: Summary of NIEN Market Operations Business Plan Submission and UR Draft Determination

NIEN Submission	Oct 17- Mar 18	Apr18 Mar19	Apr19- Mar20	Apr20- Mar21	Apr21- Mar22	Apr22- Mar23	Apr23- Mar24	Total, £m
Metering Capex Total	4.89	7.90	6.72	6.60	6.14	6.03	5.94	44.22
Metering Overheads (allocated to Capex)	0.60	1.22	1.24	1.24	1.24	1.32	1.24	8.09
Metering services: administrative costs	0.94	1.90	1.92	1.92	1.92	2.00	1.92	12.53
Market Opening: administrative costs	0.10	0.20	0.21	0.21	0.21	0.22	0.21	1.36
Meter Reading: administrative costs	0.23	0.48	0.48	0.48	0.48	0.52	0.48	3.16
Meter Reading	1.85	3.72	3.75	3.78	3.81	3.84	3.87	24.63
Metering maintenance	0.34	0.68	0.68	0.68	0.68	0.68	0.68	4.42
Other operating costs relating to keypad meters	0.05	0.11	0.11	0.11	0.11	0.11	0.11	0.68
Revenue Protection Services costs	0.25	0.49	0.49	0.49	0.49	0.49	0.49	3.19
Revenue Protection Services income	-0.16	-0.33	-0.33	-0.33	-0.33	-0.33	-0.33	-2.12
Transactional Charges	0.15	0.30	0.30	0.30	0.30	0.30	0.30	1.93
Transactional Income	-0.36	-0.71	-0.71	-0.71	-0.71	-0.71	-0.71	-4.64
TOTAL	8.87	15.96	14.86	14.77	14.33	14.46	14.20	<u>97.45</u>
TOTAL (excluding capex direct costs)	4.24	8.57	8.65	8.68	8.71	8.94	8.78	<u>56.58</u>
UR Draft Determination	Oct 17- Mar 18	Apr18- Mar19	Apr19- Mar20	Apr20- Mar21	Apr21- Mar22	Apr22- Mar23	Apr23- Mar24	Total, £m
Metering Capex Total	4.83	7.80	6.41	6.29	5.96	5.88	5.79	42.98
Metering Overheads (allocated to Capex)	0.42	0.84	0.85	0.85	0.85	0.88	0.85	5.54
Metering Services: administrative costs	0.64	1.29	1.29	1.29	1.29	1.29	1.29	8.37
Market Opening: administrative costs	0.10	0.20	0.21	0.21	0.21	0.22	0.21	1.36
Meter Reading: administrative costs	0.24	0.49	0.49	0.49	0.49	0.49	0.49	3.16
Meter Reading	1.76	3.52	3.52	3.52	3.52	3.52	3.52	22.88
Metering Maintenance Total	0.29	0.57	0.57	0.57	0.57	0.57	0.57	3.73
Operating costs relating to keypad meters	0.05	0.11	0.11	0.11	0.11	0.11	0.11	0.68
Revenue Protection Services costs	0.24	0.47	0.47	0.47	0.47	0.47	0.47	3.06
Revenue Protection Services income	-0.17	-0.34	-0.34	-0.34	-0.34	-0.34	-0.34	-2.23
Transactional Charges	0.15	0.30	0.30	0.30	0.30	0.30	0.30	1.93
Transactional Income	-0.36	-0.71	-0.71	-0.71	-0.71	-0.71	-0.71	-4.62
TOTAL	8.19	14.53	13.16	13.04	12.71	12.66	12.54	<u>86.83</u>
TOTAL (excluding capex direct costs)	3.62	7.25	7.26	7.26	7.26	7.30	7.26	<u>47.19</u>
Difference in Totals								<u>10.62</u>
Difference in Totals (excluding direct costs)								<u>9.38</u>

2 Meter Assumptions and Approach

NIEN Assumptions

Smart Metering

- 2.1 NIEN have made a number of assumptions in their RP6 metering submission. A key assumption is that their submission makes no provision for smart metering. It also assumes no change in current meter specification or functionality.
- 2.2 NIEN note that, even without smart metering it is unlikely that the current status quo will continue as market and regulatory requirements are likely to evolve in the period out to March 2024. Furthermore, that these factors cannot be forecast reliably and are largely outside of NIEN's control and have the potential to present significant additional costs in RP6 should they occur. NIEN note that the price control should provide appropriate mechanisms to deal with these uncertainties.
- 2.3 As such, in their submission, NIEN propose that any efficiently incurred increase in costs arising from any legislative or regulatory requirement to change meter specification should be separately recoverable under the Change of Law provisions of NIEN's distribution licence.

Unit Cost Allowance

- 2.4 NIEN note that the RP5 price control provided a unit cost allowance for different categories of metering work to allow the overall allowance to flex according to the actual volume of work completed. NIEN were of the view that this reduced uncertainty in the setting of ex ante allowances to the benefit of both NIE Networks and consumers by reducing the risk of windfall gains or losses that could otherwise result from variances between forecast and outturn work volumes.
- 2.5 The RP6 submission assumes that allowances for the RP6 price control are also set on a unit cost basis for the main programmes of metering work.

Revised Unit Costs

- 2.6 In February 2017 NIEN submitted revised unit costs for the installation of credit meters for routine meter installs/changes and recertification work. NIEN advised that their current provider of credit meters informed them that they will be ceasing production of these meters from July 2017 because of the effects of environmental waste legislation.
- 2.7 NIEN also noted that advances in metering developments elsewhere are expected to greatly restrict the choice offered by meter manufacturers to NIE Networks to meet the more basic metering requirements of the Northern Ireland retail market.

- 2.8 In particular, as the rollout of smart metering progresses in other jurisdictions, it is less likely that manufacturers will continue to offer meters with more basic functionality such as the single rate credit meters NIEN have assumed in their RP6 plan. As a result, NIE Networks expect that costs will increase to maintain the more basic Northern Ireland specific requirement. Because of the recent announcement of the imminent withdrawal of their current supplier, this point will now be reached much sooner than they had anticipated in preparing their Business Plan.
- 2.9 NIEN advised that whilst the contract to supply credit meters will be retendered they expect that there will be a limited number of alternative providers available and that this is expected to increase the unit cost for these meters significantly from 2018/19 onwards. NIEN have assessed that the rise in unit costs would increase direct metering costs by £2.15m compared to their original RP6 Business Plan.

UR Response

Smart Metering

- 2.10 We note NIEN's assumptions with regards to smart metering. At this stage there are no plans for a smart meter roll-out in Northern Ireland within the price control period. The Department for Economy are the government department responsible for a decision on whether a smart meter roll-out will be required.
- 2.11 As such we agree with NIEN's assumption not to include any provisions for smart metering within their RP6 submission. Should a smart metering programme be initiated within the price control period, the potential costs would be significant and outside of the allowances of RP6. We consider that the Change of Law provisions within NIEN's distribution licence is the appropriate mechanism to address these costs, if a smart meter programme were to be required.

Unit Cost Allowance

- 2.12 The approach taken for the RP6 metering programmes continues with a volume driven allowance and a set unit cost for each type of meter installation as adopted in RP5. This has been applied to all metering programmes in RP6.

Revised Unit Costs

- 2.13 We note NIEN's revised submission regarding the higher unit costs for credit meters due to the future potential of a limitation of supplies for this meter type. Our initial view is that it is NIEN's responsibility to maintain a reliable source of meters from the market. This is a business risk that NIEN should manage and one that should not be shouldered by NI consumers. We accept that some countries within the EU are adopting smart meters; however there remain other significant markets that are not implementing smart meters. As such this is not a unique situation and we consider that NIEN can manage this risk.

- 2.14 We propose that NIEN continue with their tender process as suggested to determine the lowest available market unit cost. At this stage the potential risk of higher unit costs for credit meters has not realised and we do not have firm evidence on which to include these potential costs within RP6 allowances.

UR Approach

Direct Costs

- 2.15 As noted above, we have applied a unit cost for each meter type and multiplied this by the volume of meters forecast to be installed to determine the direct cost of the meters. The direct cost of the meter includes the labour to install the meter plus the meter itself. This was the approach adopted in RP5 and we have continued this for the meter installs/changes and recertification programmes.
- 2.16 We have assessed the unit costs against RP5 actuals recorded through the metering RIGS and also against the unit costs as determined by the CMA for RP5.

Indirect Costs, Metering Overheads and administrations costs

- 2.17 Where possible we have assessed forecasted costs for RP6 against the actual costs incurred for the provision of similar services under RP5. Again we have facilitated this approach by using the Metering and Financial RIGS. This approach is also consistent with the overall approach of the RP6 price control.
- 2.18 The specific approach taken to assess the elements of the Market Operations Business Plan has been to average the costs incurred between 2013 and 2016 for the relevant metering activity and assess the RP6 submission against this average. Therefore, throughout the document, where we refer to the RIGS data in our assessment we mean the average of costs incurred between 2013 and 2016 in 15/16 prices.
- 2.19 It is not possible to assess NIEN's metering costs against other distribution network operators since in GB electricity suppliers provide this service. However we consider that the figures from the RIGS provide a good benchmark for the future costs of providing metering services in RP6 since the data provides actual costs incurred for the provision of these services in RP5.
- 2.20 The work areas assessed using this approach includes:
- Overhead and administration costs
 - Meter reading and maintenance
 - Keypad operating costs
 - Revenue Protection
 - Transactional Services

- 2.21 We have accepted NIENs' business case submission where their submitted forecast costs for RP6 are lower than the actual costs presented in the RIGS.
- 2.22 For some work areas a direct comparison has not been possible between the costs that NIEN are forecasting for RP6 and the costs they incurred for RP5. For example costs for the Meter Recertification programme were only incurred in the last year of RP5 as the programme commenced. As such NIEN note that an average assessment over 4 years would not fully capture the indirect costs (salaries and transport costs) to deliver the Recertification Programme. We have therefore made some provision for the Recertification Programme within our assessment.

3 Meter Installs/Changes

- 3.1 There are two metering programmes that contribute to metering capital expenditure – the Meter Installs/Changes and the Recertification Programme. The capital costs of the Meter Installs/Changes Programme are addressed in this section. The Meter Recertification Programme is discussed in the next section.
- 3.2 Metering Capex refers to the direct costs of the meter itself and the labour costs to install the meter. Some of the indirect costs that are incurred to manage/co-ordinate the installation of the meter are also treated as capital expenditure. For example a portion of the salaries of the staff that schedule the meter installation are treated as a capital cost.

NIEN Submission

- 3.3 Meter Installs/Changes relates to the metering services for installing, exchanging and alteration of electricity meters at the request of electricity suppliers. This includes metering in domestic, commercial and industrial properties including generators.
- 3.4 NIEN have submitted the unit costs and volumes for the Meter Installs/Changes programme in Table 2 which results in the costs (£m) set out in Table 3. The cost of the meter and its installation are referred to as direct costs. The salaries and transport costs of the in-house NIEN staff that support the delivery of the meter installs/changes are referred to as indirect costs.
- 3.5 Further detail on NIEN's submission can be found in the relevant sections of NIEN's Market Operations Business Plan. We have commented on the relevant sections in the UR Response section below.

Table 2: NIEN submitted units costs and volumes for Meter Installs/Changes programme

	Unit price	Oct 17 Mar 18	Apr18 Mar19	Apr19 Mar20	Apr20 Mar21	Apr21 Mar22	Apr22 Mar23	Apr23 Mar24	Total, £m
Credit Meters	21.11	16,000	32,000	32,000	32,000	32,000	32,000	32,000	208,000
Keypad	73.66	11,000	22,000	22,000	22,000	22,000	22,000	22,000	143,000
Commercial	137.54	2,000	4,000	4,000	4,000	4,000	4,000	4,000	26,000

Table 3: NIEN submitted costs Meter Installs/Changes programme

Meter Installs/Changes Program	Oct 17 Mar 18	Apr18 Mar19	Apr19 Mar20	Apr20 Mar21	Apr21 Mar22	Apr22 Mar23	Apr23 Mar24	Total, £m
Credit Meters	0.338	0.675	0.675	0.675	0.675	0.675	0.675	4.39
Keypad	0.81	1.62	1.62	1.62	1.62	1.62	1.62	10.533
Commercial	0.275	0.55	0.55	0.55	0.55	0.55	0.55	3.576
Total Direct Costs	1.42	2.85	2.85	2.85	2.85	2.85	2.85	<u>18.50</u>
Indirect Costs	0.54	1.07	1.07	1.07	1.07	1.07	1.07	<u>6.97</u>
Total Meter Installs/Changes	1.96	3.92	3.92	3.92	3.92	3.92	3.92	<u>25.47</u>

UR Response

Meter Installs/changes Unit Costs

- 3.6 We have assessed NIEN's proposed unit costs for the credit, keypad and commercial meters in RP6 against the actual costs supplied in the Meter RIGS figures. We have also assessed the proposed unit cost against the allowances that were determined by the CMA for RP5.
- 3.7 As set out in Table 4, NIEN's RP6 submission for the Credit and Commercial meters are in line with both the average unit cost and 2016 unit cost as provided through the RIGs submission. The RP6 submission for keypad meters are lower than the costs that have been incurred through the RIGs.
- 3.8 The CMA unit costs were based on a mixture of the actual costs incurred where possible and NIEN's forecast at the time. Table 5 shows that all of the RP6 unit costs for the Meter Installs/Changes programme are lower than the uplifted CMA unit costs. NIEN note that this is due to their competitive tendering process.
- 3.9 We consider that the proposed unit costs for the meter/installs programme are appropriate since they are in line with the RIGs submission and have reduced in real terms compared to the CMA determination. We therefore propose to accept NIEN's unit costs for meter installs/changes.

Table 4: Review of unit costs for Meter Installs/Changes Programme

	RP5 unit costs as per CMA determination (09/10 prices)	RP5 unit costs (15/16 prices)	NIEN RP6 submission (15/16 prices)	RIG Submission	
				Average unit cost 2013-2016 (15/16 prices)	2016 unit cost (15/16 prices)
Credit	27.8	33.4	21.11	20.5	20.94
Keypad	72	86.5	73.66	78.21	80.36
Commercial	205	246.28	137.54	138.21	141

Meter Installs/Change Volumes

- 3.10 A comparison between the volumes of meters installed/changed under RP5 and those forecast to be installed/changed is set out in Table 5 below.

Table 5: Review of volumes for Meter Installs/Changes Programme

Volume of metering units installed	RP5 ¹ (actual)	RP6 ² (forecast)	Difference	% increase
Meter Installs/Changes				
SOSA Keypad	131,476	143,000	11,524	8.8%
SOSA Credit meters	190,314	208,000	17,686	9.3%
Commercial	22,370	26,000	3,630	16.2%
Total	344,160	377,000	32,840	9.5%

- 3.11 The volumes forecast to be delivered in RP6 are higher than those implemented in RP5, which raises the question whether NIEN will be able to meet the forecasted roll-out rates. We acknowledge that these are forecast figures and because volumes for meter installs/changes are largely driven by electricity suppliers and customer demands, it is difficult to forecast in the long term to 2024 with accuracy.
- 3.12 However the volume driven allowance caters for the variance between the forecast figures and the actual volumes installed/changed by correcting the forecasted values with the actual volumes when the number of installed meters is known.

Meter Installs/Change Indirect Costs allocated to capex

- 3.13 The submission by NIEN also includes indirect costs associated with meter installs/changes of £1.07m per annum. These costs largely relate to the salaries of staff to manage and administer the metering programmes (£0.8m) as well as transport (£0.25m) and other costs (£0.02m).
- 3.14 We accept that the indirect costs for additional staff are required to carry out the scheduling and back office roles to implement the meter replacement programmes. These activities are not carried out by electricity DNOs in Great Britain as the electricity suppliers carry out these supporting activities. As such we do not have any direct benchmark data to assess the costs for carrying out these specific activities.
- 3.15 Our approach has been to use the RIGs data to assess NIEN's submission against actual costs incurred for the indirect costs. However figures within the financial data only provide a total figure for the indirect costs allocated to capex for all metering programmes. They do not provide a breakdown of the indirect costs specifically incurred for the individual metering programmes for comparison.
- 3.16 However at our request NIEN provided a breakdown of the indirect costs for each of the metering programmes carried out in RP5. We received this information shortly before publication of the draft determination and as such have not fully assessed the figures nor discussed them in more depth with NIEN. These indirect costs are set out in Table 6.

¹ Source: Reporting Workbook 28.11.16, Capex Incentive sheet

² Source: Distribution Cost and Volumes Reporting Workbook

Table 6: NIEN submission for indirect costs incurred under the meter installs/changes and meter recertification programmes

Indirect costs allocated to Metering Capex (£m, nominal prices)	2013	2014	2015	2016
Meter Installs	0.894	0.820	0.842	0.853
Meter Recertification	0.000	0.000	0.000	0.159
Overheads & Admin	0.034	0.290	0.249	0.182
Total	0.928	1.110	1.091	1.194

- 3.17 The indirect costs allocated to metering capex for the Meter Installs programme of c.£0.8m per annum is almost double the £0.42m that NIEN have allocated in their submission. We are seeking an explanation of why NIEN foresee a reduction in costs in this area. We will engage with NIEN over the course of the consultation period to assess this additional information.
- 3.18 Pending further discussion with NIEN, we have aligned with their approach and that of the Regulatory Accounts, by allocated 39% of NIEN's proposed indirect costs (£1.07m per annum) for the Meter Installs/updates to metering capex. Our draft determination is set out in Table 7.
- 3.19 Under the RIGs data the indirect costs for all metering programmes are assigned to both a capex and opex element to align with the approach taken for the Regulatory Accounts. NIEN have advised that the split of 39% capex and 61% opex is based upon how these costs were allocated in financial data RIGS for the years 2012/13, 2013/14 and 2014/15.
- 3.20 This may explain the actual split in figures but it does not explain how the costs were assigned to either capex or opex in the first instance. We are seeking further clarification from NIEN on this during the consultation period. We have adopted NIENs split in our assessment pending further clarification.
- 3.21 The opex element of indirect costs (61%) for Meter Installs/Changes is considered in *Metering Services: Allocation of administrative costs* which is discussed in section 6 – allocation of administrative costs.

Meter Installs/Change Summary

- 3.22 There is no change between NIEN's proposed direct costs for Meter Installs/Changes and the UR's draft determination. We accept the units costs submitted as they are in line with RP5 actuals and have reduced since the CMA determination.
- 3.23 Table 7 provides a summary of NIEN's submission and UR's draft determination. Notably a higher number of meters are forecast to be installed/changed within RP6 compared to RP5. However the volume based allowance will correct any difference between forecast and outturn.

Table 7: Summary of NIEN’s submission and UR’s draft determination for Meter Installs/Changes

NIEN Submission		Oct-17	Apr-18	Apr-19	Apr-20	Apr-21	Apr-22	Apr-23
		Mar-18	Mar-19	Mar-20	Mar-21	Mar-22	Mar-23	Mar-24
Meter Installs/Changes								
	<i>Direct Costs</i>	1.42	2.85	2.85	2.85	2.85	2.85	2.85
	<i>39% of Indirect Costs allocated to capex</i>	0.21	0.42	0.42	0.42	0.42	0.42	0.42
UR Draft Determination		Oct-17	Apr-18	Apr-19	Apr-20	Apr-21	Apr-22	Apr-23
		Mar-18	Mar-19	Mar-20	Mar-21	Mar-22	Mar-23	Mar-24
Meter Installs/Changes								
	<i>Direct Costs</i>	1.42	2.85	2.85	2.85	2.85	2.85	2.85
	<i>39% of Indirect Costs allocated to capex</i>	0.21	0.42	0.42	0.42	0.42	0.42	0.42

4 Meter Recertification

NIEN Submission

- 4.1 Meter Recertification relates to NIEN's statutory obligations to use meters that remain within a certified period. As such NIEN are required to replace a meter when it reaches the end of its prescribed certification life.
- 4.2 The Meter Recertification programme commenced in 2016 which delivered c.9,000 meters. The programme is set to ramp up significantly in RP6 which is reflected in the higher costs presented in Table 8.
- 4.3 The higher cost per annum forecast for RP6 set out in Table 8 also reflects changes in the mix of meter types being replaced; for example, the RP6 programme will focus on replacement of a greater number of commercial meters than is the case for RP5. NIEN highlight that these replacements have a higher unit cost compared with standard domestic meter replacements.

Table 8: NIEN submitted costs for Meter Recertification Programme

	Oct-17	Apr-18	Apr-19	Apr-20	Apr-21	Apr-22	Apr-23	Total, £m
	Mar-18	Mar-19	Mar-20	Mar-21	Mar-22	Mar-23	Mar-24	
Total	3.33	4.78	3.60	3.48	3.02	2.91	2.82	23.93
Direct	3.21	4.54	3.36	3.24	2.78	2.67	2.58	22.38
Indirect	0.12	0.24	0.24	0.24	0.24	0.24	0.24	1.55

- 4.4 In their figures, NIEN have also included the costs for the Meter Replacement for Theft Programme. This programme, which targets premises suspected of electricity theft, commenced in RP5 and continues in RP6.
- 4.5 NIEN have submitted the unit costs and volumes for the Meter Recertification programme in Table 9 which results in the costs set out in Table 10.

Table 9: NIEN submitted unit costs and volumes for Meter Recertification Programme

	Unit unit costs	Oct-17 Mar- 18	Apr-18 Mar- 19	Apr-19 Mar- 20	Apr-20 Mar- 21	Apr-21 Mar- 22	Apr-22 Mar- 23	Apr-23 Mar- 24	Total
Credit Meters	33.59	30,000	40,000	15,000	15,000	11,000	6,000	5,000	122,000
Keypad	85.17	13,000	18,000	15,000	15,000	15,000	15,000	15,000	106,000
Commercial	270	1,750	3,500	3,500	3,500	3,500	3,500	3,500	22,750
Commercial Other									
110/33kv Bulk Supply Point and Sub-Station metering	2,724	5	11	11	11	10	10	10	68
Power Stations >100MW Metering	13,333	3	3	10	15	0	3	0	34
Generator metering <100MW and >1MW	3,029	7	7	0	3	4	2	0	23
HV Demand customer Metering >1MW	1,005	50	57	21	23	6	31	18	206
HV Demand customer Metering >1MW	481	17	18	13	20	18	19	22	127
Teleswitch/Telemeter replacement programme	55	2,000	3,000	3,000	0	0	0	0	8,000
Northern Ireland Customer Load Profiles	123	200	400	400	100	100	100	100	1,400
Meter Replacement for theft	117	3,000	3,000	2,000	2,000	1,000	1,000	1,000	13,000

Table 10: NIEN submitted costs for Meter Recertification Programme

	Oct-17 Mar-18	Apr-18 Mar-19	Apr-19 Mar-20	Apr-20 Mar-21	Apr-21 Mar-22	Apr-22 Mar-23	Apr-23 Mar-24	TOTAL €m
Credit Meters	1.008	1.344	0.504	0.504	0.369	0.202	0.168	4.098
Keypad	1.107	1.533	1.278	1.278	1.278	1.278	1.278	9.028
Commercial	0.473	0.945	0.945	0.945	0.945	0.945	0.945	6.143
TOTAL	2.588	3.822	2.727	2.727	2.592	2.425	2.391	<u>19.269</u>
COMMERCIAL OTHER								
110/33kv Bulk Supply Point and Sub- Station metering	0.014	0.03	0.03	0.03	0.027	0.027	0.027	0.185
Power Stations >100MW Metering	0.04	0.04	0.133	0.2	0	0.04	0	0.453
Generator metering <100MW and >1MW	0.021	0.021	0	0.009	0.012	0.006	0	0.07
HV Demand customer Metering >1MW	0.05	0.057	0.021	0.023	0.006	0.031	0.018	0.207
HV Demand customer Metering >1MW	0.008	0.009	0.006	0.01	0.009	0.009	0.011	0.061
Teleswitch/Telemeter replacement programme	0.11	0.165	0.165	0	0	0	0	0.44
Northern Ireland Customer Load Profiles	0.025	0.049	0.049	0.012	0.012	0.012	0.012	0.172
TOTAL	0.268	0.371	0.404	0.284	0.066	0.125	0.068	<u>1.588</u>
Meter Replacement for theft	0.351	0.351	0.234	0.234	0.117	0.117	0.117	<u>1.521</u>
TOTAL DIRECT COSTS	3.207	4.544	3.365	3.245	2.775	2.667	2.576	<u>22.378</u>

UR Response

Meter Recertification Unit Costs

- 4.6 As noted previously we have assessed NIEN's proposed unit costs for RP6 against the metering RIG unit costs and those that were determined by the CMA for RP5. Table 11 sets out our assessment of the unit costs of the meter recertification programme.

Table 11: Review of unit costs for Meter Recertification Programme

	RP5 unit costs as per CMA determination (09/10 prices)	RP5 unit costs (15/16 prices)	NIEN RP6 submission (15/16 prices)	RIG Submission	
				Average unit cost 2013- 2016 (15/16 prices)	2016 unit cost (15/16 prices)
				Recertification Credit Meters	23.72
Keypad Recertification	76.51	91.92	85.17	108.381	108.381
Commercial recertification	242	290.74	270	271.521	271.521
Meter Replacement for Theft	96.5	115.93	117	118.411	118.411
09/10 average RPI	216	20.14%			
15/16 average RPI	259.5				

- 4.7 There is no data contained within the RIGS for the unit costs of recertification credit meters as no credit meters were recertified in 2016. The submitted figure of £33.59 is higher than the uplifted CMA figure of £28.5.
- 4.8 Whilst there is no record within the RIGS data for comparison, NIEN have replaced credit meters with pre-payment meters and should therefore know the relevant costs for removing a credit meter. We will explore this further with NIEN during the consultation. We have adopted the uplifted figure of £28.50, as per the CMA determination, prior to determining a more accurate figure for recertification credit meters.
- 4.9 In their submission NIEN state that the unit costs have increased for recertification of credit meters because of an increase in labour costs due to increased demand for electricians in the economy. Also the opportunity to spread the recovery of their costs over higher volumes will diminish as the volume of meter install reduces at the back end of RP6. The unit costs were based upon NIEN's best estimate of RP6 direct labour costs for credit meter recertification on current contractor rates.
- 4.10 Additionally RP5 allowances were based upon NIEN desk-top estimate at the time prior to programme commencement and were therefore uncertain.

- 4.11 NIEN's submitted unit costs £270 for commercial meters are in line with the actuals presented within the RIGs. This cost is also lower than the uplifted CMA figure.
- 4.12 NIEN's submitted figures for the units costs for the Revenue Protection Unit (RPU) keypads are in line with actuals incurred and the uplifted CMA figure.
- 4.13 We have not assessed the unit costs for the recertification of higher voltage commercial meters that are presented in Table 9. These represent a small proportion of the meter volumes to be installed and overall meter costs and have not been included in our analysis.
- 4.14 We are minded to accept the submitted unit costs for all of the recertification meters, except the recertification of credit meters as discussed above. On the whole they have reduced from CMA determination and are in line with actuals.

Meter Recertification Volumes

- 4.15 A comparison between the volumes of meters installed/changed under RP5 and those forecast to be installed/changed in RP6 is set out in the Table 12 below.

Table 12: Comparison of recertification meter volumes in RP5 and RP6.

Volume of metering units installed	RP5 ³ (actual)	RP6 ⁴ (forecast)	Difference
<u>Recertification</u>			
Credit meters	18,000	122,000	104,000
Commercial	4,535	32,608	28,073
Keypad	62,578	106,000	43,422
<u>Meter replacement for theft</u>	12,300	13,000	700
Total	97,413	273,608	176,195

- 4.16 There is a significant increase in the meter recertification programme compared to the actual installed in RP5. NIEN note that this reflects the age profile of the meter population and the legal requirement to replace the ageing meter stock.

Meter Replacement for Theft Volumes

- 4.17 NIEN's submission for meter replacement for theft totalled 24,400 meters split over RP5 and RP6. We have limited this to 20,000 meters in total to be split across RP5 and RP6.
- 4.18 This project was to target premises suspected of theft and was initially scoped, as a short term measure, at 10,000 meters. However the project has been successful in tackling electricity theft and we agreed to extend the programme by a further 10,000

³ Source: Reporting Workbook 28.11.16, Capex Incentive sheet

⁴ Source: Distribution Cost and Volumes Reporting Workbook

meters. However, at this stage, we do not plan to extend the programme much beyond the 20,000 if it is not necessary to do so.

- 4.19 Other programmes and initiatives are expected to address electricity metering theft rather than extending the meter replacement for theft programme. As part of its rollout, the recertification and meter installs/changes programmes are expected to capture some of the premises that are carrying out theft, even though the premises have not been specifically targeted.
- 4.20 Additionally implementation of the UR's Energy Theft Code of Practice is expected to reduce electricity theft within the sector.
- 4.21 As such we do not plan to extend the programme from its current 20,000 figure. However should circumstances arise that trigger a further extension we would consider extending the programme. The unit costs for any future meter replacement programme would need to be reviewed in light of market conditions at the time for these types of meter.

Meter Recertification Indirect Costs allocated to capex

- 4.22 The indirect costs of £0.24m are incurred by the 7 FTEs to manage and administer the delivery of the recertification programme. NIEN use contractors to deliver the recertification programme. The contractor costs are included within the unit costs for the type of meter recertification considered in the section above.
- 4.23 NIEN have noted that it is not appropriate to use averaged data over the past four years of financial RIGs since the meter recertification work only commenced with the last year of the RP5 price control.
- 4.24 We are not proposing any changes to NIEN's submitted indirect costs for recertification. In line with the Regulatory Accounts (and Meter Installs/Changes) we have allocated 39% of the indirect costs associated with meter recertification to metering capex. As noted in the Meter Installs/Changes section we are awaiting further clarification on why this split has been adopted.
- 4.25 We have allocated the remaining 61% of the indirect costs for metering to Metering Services: Allocation of overhead and administration costs. These costs are discussed in section 6.

Meter Recertification Summary

Table 13: Summary of NIEN’s submission and UR’s draft determination for Meter Recertification Programme

	Oct-17	Apr-18	Apr-19	Apr-20	Apr-21	Apr-22	Apr-23
	Mar-18	Mar-19	Mar-20	Mar-21	Mar-22	Mar-23	Mar-24
NIEN Submission							
<u>Meter Recertification</u>							
<i>Direct Costs</i>	2.86	4.19	3.13	3.01	2.66	2.55	2.46
<i>39% of Indirect Costs allocated to capex</i>	0.05	0.09	0.09	0.09	0.09	0.09	0.09
<u>Meter Replacement for Theft</u>	0.351	0.351	0.234	0.234	0.117	0.117	0.117
	Oct-17	Apr-18	Apr-19	Apr-20	Apr-21	Apr-22	Apr-23
	Mar-18	Mar-19	Mar-20	Mar-21	Mar-22	Mar-23	Mar-24
UR Draft Determination							
<u>Meter Recertification</u>							
<i>Direct Costs</i>	2.70	3.99	3.05	2.93	2.60	2.52	2.43
<i>39% of Indirect Costs allocated to capex</i>	0.05	0.09	0.09	0.09	0.09	0.09	0.09
<u>Meter Replacement for Theft</u>	0.450	0.450	0.000	0.000	0.000	0.000	0.000

5 Metering Overheads

5.1 Metering Overheads are the operating costs that support the delivery of metering services. They comprise the following: Fault and Emergency response (ER); Information Technology (IT), Stores and Safety; and Finance and Human Resources (HR) costs. Further detail is provided in NIE Network's Market Operations Business Plan for each category but we have provided a short overview below.

- **ER Shift, Ops and Outage, DSC** refers to the allocation of costs from NIEN's Control Centre and Customer Call Centre functions to reflect their role in the management of metering faults.
- **IT** includes costs associated with the provision and support of computer and telecoms for office based staff and hand-held communication devices used by field staff.
- **Stores** includes the costs of procuring, storing and issuing metering equipment
- **Safety** relates to the cost of managing the health and safety of metering electricians, meter readers and office-based staff. In particular training related to those staff working in close proximity to live electricity.
- **Finance** includes the costs of financial reporting and analysis for accounting purposes and to ensure the availability of performance information to manage operations.
- **HR** costs include the costs of managing payroll, recruitment and other staff support requirements.

5.2 As per the Regulatory Accounts, 39% of these costs are allocated to metering capex and recorded under Metering Overheads which is addressed in this section. The remaining 61% is recorded as opex under the allocation of administration costs expanded in section 6.

NIEN Submission

5.3 The relevant costs submitted by NIEN for 'Other Costs' are outlined below in Table 14.

Table 14: NIEN's submission of costs for Other Costs incurred by Market Operations

	Oct-17	Apr-18	Apr-19	Apr-20	Apr-21	Apr-22	Apr-23	Total £m
	Mar-18	Mar-19	Mar-20	Mar-21	Mar-22	Mar-23	Mar-24	
ER Shift, Ops & outage, DSC	0.10	0.20	0.20	0.20	0.20	0.20	0.20	1.31
IT, Stores and Safety	0.54	1.14	1.18	1.18	1.19	1.19	1.19	7.62
Finance and HR	0.41	0.83	0.83	0.83	0.83	0.83	0.83	5.36
Other Business Support	0.47	0.95	0.95	0.95	0.95	1.15	0.95	6.35
Total	1.528	3.111	3.155	3.157	3.161	3.362	3.162	20.638

5.4 Applying the 39% returns the figures presented in Table 15.

Table 15: Allocation of Other Costs to Metering Capex

	Oct-17	Apr-18	Apr-19	Apr-20	Apr-21	Apr-22	Apr-23	Total £m
	Mar-18	Mar-19	Mar-20	Mar-21	Mar-22	Mar-23	Mar-24	
ER Shift, Ops & outage, DSC	0.039	0.079	0.079	0.079	0.079	0.079	0.079	0.513
IT, Stores and Safety	0.212	0.446	0.464	0.464	0.466	0.466	0.466	2.986
Finance and HR	0.162	0.323	0.323	0.323	0.323	0.323	0.323	2.103
Other Business Support	0.185	0.371	0.371	0.371	0.371	0.449	0.371	2.489
Total	0.599	1.220	1.237	1.238	1.239	1.318	1.240	8.090

5.5 These costs are then apportioned to:

- Metering – Allocation of overhead and admin
- Market Opening – Allocation of overhead and admin
- Meter Reading - Allocation of overhead and admin

Table 16: Other Costs apportioned to Metering, Market Opening and Meter Reading

Metering Overheads	Oct-17	Apr-18	Apr-19	Apr-20	Apr-21	Apr-22	Apr-23	Total £m
	Mar-18	Mar-19	Mar-20	Mar-21	Mar-22	Mar-23	Mar-24	
Metering – allocation of overhead and admin	0.383	0.781	0.792	0.792	0.793	0.844	0.793	5.178
Market Opening – Allocation of overhead and admin	0.065	0.132	0.134	0.134	0.134	0.142	0.134	0.874
Meter Reading – Allocation of overhead and admin	0.151	0.307	0.312	0.312	0.312	0.332	0.312	2.039
Total	0.599	1.220	1.237	1.238	1.239	1.318	1.240	8.090

UR Response

5.6 As per our approach we have assessed the metering overheads for each of the three areas against the actuals that have been incurred for RP5. The actuals are set out in Table 17.

Table 17: RIGS data for Metering Overheads

Metering Overheads	Oct-17	Apr-18	Apr-19	Apr-20	Apr-21	Apr-22	Apr-23	Total £m
	Mar-18	Mar-19	Mar-20	Mar-21	Mar-22	Mar-23	Mar-24	
Metering – allocation of overhead and admin	0.202	0.404	0.404	0.404	0.404	0.404	0.404	2.629
Market Opening – Allocation of overhead and admin	0.102	0.204	0.204	0.204	0.204	0.204	0.204	1.327
Meter Reading – Allocation of overhead and admin	0.158	0.316	0.316	0.316	0.316	0.316	0.316	2.051
Total	0.462	0.924	0.924	0.924	0.924	0.924	0.924	6.006

5.7 If we compare the UR proposed allowance with the NIEN submission for the three areas.

Metering – allocation of overhead and admin

5.8 There is a significant difference between our proposed allowance of £2.629m and NIEN's submission of £5.178m over the price control period. From the information submitted by NIEN we are not clear why there is such a difference between the costs that have been incurred in RP5 compared to those forecast in RP6 for this area.

5.9 We accept that there are new work programmes within RP6 that will not have been fully reflected within the actuals incurred for RP5 such as the meter recertification programme. We have however included the indirect costs for this programme but we do not see how the addition of these programmes would increase the overheads significantly.

- 5.10 We expect that existing HR and Finance resources and systems could cater for the addition of a new programme. The meter recertification programme is outsourced to contractors and the costs of the team to manage the contractors have been included within the indirect costs.
- 5.11 Similarly we would expect the existing resources within IT, Stores and Safety to cater for new programmes. These functions should be flexible so as to take on different projects and work programmes rather than increasing costs per additional project.
- 5.12 Again, we would expect that the existing resources to provide the services under ER Shift, Ops and Outage and DSC would be able to address new projects without additional costs. The supporting systems, management and operational resources are already in place and should be able to address new projects.
- 5.13 We have asked NIEN to provide their reasoning for why costs have increased in this area. We will consider any new information in our assessment; however for the reasoning above we consider that the actuals incurred under RP5 form a consistent basis for future costs in this area.

Market Opening – allocation of overhead and admin

- 5.14 The RIGS figure of £1.327m is greater than NIEN’s submission of £0.874m. As per our approach, where NIEN have submitted lower costs, we have adopted NIEN’s costs for this work area under RP5.

Meter Reading – allocation of overhead and admin

- 5.15 The total costs incurred under RP5 for overhead and administration costs allocated to Meter Reading (£2.051m) are similar to NIEN’s submission of (£2.039m). We would expect meter reading to be a consistent activity and these figures reflect that. We have adopted NIEN’s submitted figures for this work area.
- 5.16 Our draft determination is set out in Table 18.

Table 18: UR Draft Determination for Metering Overheads

Metering Overheads	Oct-17	Apr-18	Apr-19	Apr-20	Apr-21	Apr-22	Apr-23	Total £m
	Mar-18	Mar-19	Mar-20	Mar-21	Mar-22	Mar-23	Mar-24	
Metering – allocation of overhead and admin	0.202	0.404	0.404	0.404	0.404	0.404	0.404	2.629
Market Opening – Allocation of overhead and admin	0.065	0.132	0.134	0.134	0.134	0.142	0.134	0.874
Meter Reading – Allocation of overhead and admin	0.151	0.307	0.312	0.312	0.312	0.332	0.312	2.039
Total	0.418	0.843	0.850	0.850	0.851	0.879	0.851	5.541

6 Allocation of administrative costs

NIEN Submission

6.1 Administrative costs and overheads for the following activities:

- ER Shift, Ops and Outage, DSC
- IT, Stores and Safety
- Finance and HR
- Other Business Support
- A proportion of the indirect costs (salaries/transport) for the metering programmes

are allocated to opex costs by applying a 61% split of the total costs. The capex split (39%) of these administrative costs was discussed in section 5.

6.2 NIEN's submission for these costs is set out in Table 19 below:

Table 19: NIEN's submission for administrative costs

Administrative Costs	Oct-17	Apr-18	Apr-19	Apr-20	Apr-21	Apr-22	Apr-23	Total £m
	Mar-18	Mar-19	Mar-20	Mar-21	Mar-22	Mar-23	Mar-24	
Metering – allocation of overhead and admin	0.940	1.902	1.919	1.920	1.922	2.000	1.922	12.53
Market Opening – Allocation of overhead and admin	0.100	0.204	0.207	0.207	0.208	0.221	0.208	1.36
Meter Reading – Allocation of overhead and admin	0.234	0.477	0.483	0.484	0.484	0.515	0.485	3.16
Total	1.275	2.583	2.610	2.611	2.614	2.736	2.614	17.043

UR Response

6.3 As per our approach we have assessed the metering overheads for each of the three areas against the actuals that have been incurred for RP5. The RIGS data is set out below in Table 20.

Table 20: RIGS data for allocation of administrative costs

Administrative Costs	Oct-17	Apr-18	Apr-19	Apr-20	Apr-21	Apr-22	Apr-23	Total £m
	Mar-18	Mar-19	Mar-20	Mar-21	Mar-22	Mar-23	Mar-24	
Metering Services: Allocation of administrative costs total	0.57	1.14	1.14	1.14	1.14	1.14	1.14	7.43
Market Opening: Allocation of administrative costs	0.15	0.30	0.30	0.30	0.30	0.30	0.30	1.98
Meter Reading: Allocation of administrative costs	0.24	0.49	0.49	0.49	0.49	0.49	0.49	3.16
Total	0.96	1.93	1.93	1.93	1.93	1.93	1.93	12.57

6.4 If we compare the UR proposed allowance with the NIEN submission for the three areas:

Metering – allocation of overhead and admin

6.5 Similar to the discussion on the previous section there is a significant difference between the RIGS data of £7.43m and NIEN’s submission of £12.53m over the price control period for the allocation of overhead and administrations costs to metering.

6.6 As per our reasoning in the previous section we expect the resources and systems that are already in place to deliver the projects that are scheduled for RP6. We have asked NIEN for their reasoning why these additional costs are expected to be incurred under RP6.

6.7 After discussions with NIEN we have however included all of the indirect costs expected to be incurred for Meter Recertification. NIEN note that the costs expected to be incurred for RP6 under Meter Recertification programme will not have been fully reflected in RP5 actuals presented in the RIGs.

6.8 We accept this argument and have allocated 39% to Metering Overheads (capex) as per section 5 and 61% has been allocated to (opex) Metering – allocation of overhead and admin in this section. We have added an adjustment to the figures in Table 21 setting out our draft determination to reflect this.

6.9 Notably we have not included 61% of indirect costs for Meter Installs/Changes programme. It is our understanding that the actual costs incurred under the RIGs figures will include the costs for the Meter Installs/Changes programme.

6.10 As such if we were to include an allowance for the indirect costs for the Meter Installs/Changes programme on top of the actuals that were incurred we could be double counting the costs for this programme of work. We have asked NIEN to confirm the allocation of indirect costs for the Meter Recertification and Meter Installs/Changes programmes.

Market Opening – allocation of overhead and admin

6.11 The RIGS figure for Market Opening – allocation of overhead and admin of £1.98m is higher than NIEN’s submission of £1.36m. As such NIEN have submitted costs that are lower than their costs incurred for this work area under RP5. We have adopted NIEN’s submission of £1.36m.

Meter Reading – allocation of overhead and admin

6.12 The UR allowance and NIEN submission for Market Reading – allocation of overhead and admin are similar.

Table 21: UR Draft Determination for allocation of administrative costs

Administrative Costs	Oct-17	Apr-18	Apr-19	Apr-20	Apr-21	Apr-22	Apr-23	Total £m
	Mar-18	Mar-19	Mar-20	Mar-21	Mar-22	Mar-23	Mar-24	
Metering Services: Allocation of administrative costs total	0.64	1.29	1.29	1.29	1.29	1.29	1.29	8.37
<i>Metering services: Allocation of administrative costs</i>	<i>0.57</i>	<i>1.14</i>	<i>1.14</i>	<i>1.14</i>	<i>1.14</i>	<i>1.14</i>	<i>1.14</i>	7.43
<i>61% of Indirect costs - Meter Recertification</i>	<i>0.07</i>	<i>0.14</i>	<i>0.14</i>	<i>0.14</i>	<i>0.14</i>	<i>0.14</i>	<i>0.14</i>	0.94
Market Opening: Allocation of administrative costs	0.10	0.20	0.21	0.21	0.21	0.22	0.21	1.36
Meter Reading: Allocation of administrative costs	0.24	0.49	0.49	0.49	0.49	0.49	0.49	3.16
Total	0.98	1.98	1.99	1.99	1.99	1.99	1.99	12.89

7 Meter Reading

NIEN Submission

- 7.1 NIEN collect and process meter reading data for all c. 860,000 customer premises throughout Northern Ireland. A small proportion of this data can be obtained remotely from meters at c. 10,000 commercial and industrial premises. However NIEN meter reading staff aim to read meters annually in order to meet their legal obligations. NIEN has a requirement to inspect electrical equipment, including meters, under the Electricity Safety, Quality and Continuity Regulations (Northern Ireland)⁵.
- 7.2 Under NIEN's Overall Standards, they are required to obtain a meter reading from 99.5% of customers once per year. To achieve this, NIEN aim to read each meter on a quarterly basis which involves over 3 million visits to customer premises per annum.
- 7.3 NIEN's submitted meter reading costs are set out in Table 22.

Table 22: NIEN submission for Meter Reading

	Oct-17	Apr-18	Apr-19	Apr-20	Apr-21	Apr-22	Apr-23	Total £m
	Mar-18	Mar-19	Mar-20	Mar-21	Mar-22	Mar-23	Mar-24	
Meter Reading	1.85	3.72	3.75	3.78	3.81	3.84	3.87	24.63

- 7.4 The costs are largely incurred by the salaries (£3.50m) of the teams providing the meter reading services. The remaining costs are due to fleet, fuel and other operating costs.

UR Response

- 7.5 We consider that meter reading is a business as usual activity. As such we expect that any opportunities to improve performance would be limited so therefore propose to continue with the costs that were reported within the RIGs.
- 7.6 In their submission NIEN note that the number of meter reads will rise as their customer base increases over the RP6 period. There may be a marginal increase over this period, however with the downturn in the economy we do not see that there will be a year-on-year increase as suggested by NIEN. We are of the view that NIEN have not provided evidence to support their proposed 0.8% increase. As such we propose to use the data that has been provided in the RIGS as set out in Table 23.

⁵ <http://www.legislation.gov.uk/nisr/2012/381/made/data.pdf>

Table 23: UR draft determination for Metering Reading

	Oct-17	Apr-18	Apr-19	Apr-20	Apr-21	Apr-22	Apr-23	Total £m
Meter Reading	Mar-18	Mar-19	Mar-20	Mar-21	Mar-22	Mar-23	Mar-24	
UR Draft Determination	1.76	3.52	3.52	3.52	3.52	3.52	3.52	22.88

8 Metering Maintenance

NIEN submission

8.1 Metering maintenance covers the following activities:

- **Faults and emergency work** which relates to NIEN staff reports of meter faults, in particular to faults that have led to an interruption of supply.
- **Meter inspection costs**

8.2 NIEN's submission is set out in Table 24 below.

Table 24: NIEN's submission for Meter Maintenance

Meter Maintenance	Oct 17-Mar 18	Apr18-Mar19	Apr19-Mar20	Apr20-Mar21	Apr21-Mar22	Apr22-Mar23	Apr23-Mar24	Total £m
Meter Inspections	0.087	0.174	0.174	0.174	0.174	0.174	0.174	1.129
Fault and Emergency	0.253	0.507	0.507	0.507	0.507	0.507	0.507	3.295
Total	0.340	0.681	0.681	0.681	0.681	0.681	0.681	4.424

8.3 NIEN propose to train some meter readers to carry out limited electrical safety work. Currently meter readers report unsealed equipment via their hand held units. This is then followed up by metering electricians within a few weeks. However NIEN note that the efficiency of this activity is limited as electricians are attending without the benefit of customer-generated appointments.

8.4 NIEN propose to change this approach by training a small team of meter inspectors to carry out a full inspection installation in tandem with their meter reading duties and also to address during that visit any non-complex remedial repairs that are required.

8.5 This would involve additional training for c. 14 meter readers to enable them to be sufficiently competent to undertake electrical work safely. They would then carry out targeted routine inspections with the aim of inspecting metering equipment in each metered premises over a 3 year cycle. During this inspection they would aim to identify items such as missing seals, defective cut outs, meter board issues and detect any interference, before finally resealing our equipment.

8.6 NIEN note that this activity would reduce their capability to obtain the same volume of meter readings as before, and it is estimated that the net effect would be to increase by 6 FTE, the staff required to maintain meter reading outputs. This additional staff requirement has been included in the meter inspections costs set out below. The average costs for this service is £0.17m per annum whereas under RP5 this was £0.05m, an additional cost of £0.12m.

8.7 However by training meter inspectors to carry out remedial repairs, NIEN note that this approach will reduce the number of follow up visits required by electricians,

approximately by 4k per annum. NIEN expect to deliver on average 62,000 metering visits per annum and their forecast of costs assumes that this volume of activity will fall to 58,000 visits per annum during RP6.

UR response

8.8 As per our approach we have assessed NIEN's submission for metering maintenance against the actuals that have been incurred for RP5. The RIGS figures are set out below in Table 25.

Table 25: RIGS data for Meter Maintenance

Meter Maintenance	Oct 17- Mar 18	Apr18- Mar19	Apr19- Mar20	Apr20- Mar21	Apr21- Mar22	Apr22- Mar23	Apr23- Mar24	RP6 Total
Meter Inspection RP5 actual	0.033	0.067	0.067	0.067	0.067	0.067	0.067	0.434
Fault and Emergency	0.268	0.536	0.536	0.536	0.536	0.536	0.536	3.484
Total	0.301	0.603	0.603	0.603	0.603	0.603	0.603	3.918

8.9 The Meter Inspections costs incurred in RP5 total £0.43m and the Faults and Emergency costs are £3.48m. NIEN have submitted lower costs for Faults and Emergencies (£3.295m) compared to actuals incurred. As per our approach, we have accepted NIEN's submission. Our draft determination is set out below in Table 26.

Table 26: UR Draft Determination data for Meter Maintenance

Meter Maintenance	Oct 17- Mar 18	Apr18- Mar19	Apr19- Mar20	Apr20- Mar21	Apr21- Mar22	Apr22- Mar23	Apr23- Mar24	RP6 Total
Meter Inspection RP5 actual	0.033	0.067	0.067	0.067	0.067	0.067	0.067	0.434
Fault and Emergency	0.253	0.507	0.507	0.507	0.507	0.507	0.507	3.295
Total	0.287	0.574	0.574	0.574	0.574	0.574	0.574	3.729

8.10 With regards NIEN's proposal to train meter readers to carry out remedial works on premises. We consider that the expected savings should cover the costs in any changes to work practices in this area.

8.11 NIEN's meter readers currently provide a visual inspection of the meter to determine whether there is any obvious physical damage, tampering or maintenance issues with the meter and/or supporting electrical equipment. Indeed the majority of the leads for the meter replacement for theft programme have come through meter readers carrying out this role. As we have noted earlier, this also ensures that NIEN meet their legal obligations with regards the safety of their equipment.

8.12 We have not provided an additional allowance to train meter readers to carry out remedial works as we consider that the expected savings should allow this change in working practice to pay for itself.

9 Other operating costs relating to keypad meters

NIEN submission

9.1 Other operating costs relating to the costs incurred for operating the IT infrastructure supporting keypad meters. NIEN's submission is set out below in Table 27.

Table 27: NIEN submission for other operating costs relating to keypad meters

Other operating costs relating to keypad meters	Oct 17- Mar 18	Apr18 Mar19	Apr19 Mar20	Apr20 Mar21	Apr21 Mar22	Apr22 Mar23	Apr23 Mar24	RP6 Total
NIEN	0.053	0.105	0.105	0.105	0.105	0.105	0.105	0.683

UR response

9.2 Our draft determination is set out below in Table 28.

9.3 We have also presented the RIGS data that has been provided by NIEN for the relevant costs incurred. Notably the figures provided in the RIGS are higher than NIEN's submission. Our approach is to adopt the figures that have been submitted by NIEN in their business case submission. However we wish to understand why NIEN are forecasting lower costs in this area than those incurred over the 2013-2016 period.

Table 28: UR Draft Determination and RIGS data for other operating costs relating to keypad meters

Other operating costs relating to keypad meters	Oct 17- Mar 18	Apr18 Mar19	Apr19 Mar20	Apr20 Mar21	Apr21 Mar22	Apr22 Mar23	Apr23 Mar24	RP6 Total
NIEN's RIGS submission	0.145	0.290	0.290	0.290	0.290	0.290	0.290	1.884
UR Draft Determination	0.053	0.105	0.105	0.105	0.105	0.105	0.105	0.683

10 Revenue Protection Services

NIEN Submission

10.1 NIEN carry out revenue protection activities to prevent, detect and investigate energy theft. The costs for carry out these activities are set out in the Table 29 below.

Table 29: NIEN submission for costs relating to Revenue Protection

Revenue Protection	Oct 17- Mar 18	Apr18 Mar19	Apr19 Mar20	Apr20 Mar21	Apr21 Mar22	Apr22 Mar23	Apr23 Mar24	RP6 Total
Revenue Protection	0.25	0.49	0.49	0.49	0.49	0.49	0.49	3.19
Revenue Protection Income	-0.16	-0.33	-0.33	-0.33	-0.33	-0.33	-0.33	-2.12

10.2 NIEN currently have an incentive mechanism whereby they retain 50% of the revenues recovered from premises that are not supplied with electricity from a registered supplier. These arrangements were designed to cover the costs of revenue protection activities and also to incentivise NIEN to maximise the recovery of monies relating to the illegal abstraction of electricity. Revenue Protection Income in the table above accounts for the revenues recovered.

10.3 However NIEN note in their Market Operations Business Plan that unauthorised supply to premises not registered with a supplier is limited to a small number of cases. Rather the majority of cases is focused in terms of units of electricity illegally abstracted and the application of a unit adjustment to customers' accounts.

10.4 NIE Networks note that, in these cases they calculate the extent of illegal abstraction in terms of units of electricity and apply a unit adjustment to the account and have no role in financial resettlement. This unit adjustment then flows through routine retail and wholesale market resettlement processes and any monies due are recovered directly from the customer by the supplier (not NIE Networks).

Revenue Protection and Income

10.5 NIEN's business plan assumes that the current incentive mechanism arrangements continue in RP6. However, in addition, they have also proposed a new revenue protection incentive for RP6. The proposal is to broaden the incentive to include all unbilled units resulting from illegal abstraction rather than just those from premises that are not registered with a supplier.

10.6 Under this scheme NIEN would receive 50% of the net gain (or loss) derived from its revenue protection services. The net gain would represent the difference between (i) the value of units identified as having been illegally abstracted; and (ii) the cost of providing revenue protection services.

- 10.7 The value of each unit of electricity identified by NIE Networks as having been illegally abstracted would be valued based on the regulated tariff price for domestic customers.
- 10.8 NIEN also note that, in addition to the incentive arrangement they would receive an allowance based on the standard unit allowance for routine meter replacement whether the meter is replaced in the course of the Standard Service or a targeted programme.

UR Response

- 10.9 We have reviewed the costs and revenues provided in the RIGS data relevant to Revenue Protection. Our proposed draft determination, set out in Table 30, is based on the average of the actual costs incurred over 2013-2016 period as per our approach. The income collected from revenues will be dependent upon the amount of theft detected from unauthorised supply to premises not registered with a supplier. However we have used the actuals collected as an indicator of future revenue to be collected from this type of electricity theft. The allowance is broadly similar to NIEN's submission.

Table 30: UR draft determination for costs relating to Revenue Protection

	Oct 17- Mar 18	Apr18 Mar19	Apr19 Mar20	Apr20 Mar21	Apr21 Mar22	Apr22 Mar23	Apr23 Mar24	RP6 Total
UR Draft Determination								
Revenue Protection	0.24	0.47	0.47	0.47	0.47	0.47	0.47	3.06
Revenue Protection Income	-0.17	-0.34	-0.34	-0.34	-0.34	-0.34	-0.34	-2.23

- 10.10 We agree with NIE Networks that the current incentive arrangement for NIEN should be retained within RP6. There is to be no change with regards these arrangements. NIEN would continue to keep 50% of the revenues recovered from premises that are not supplied with electricity from a registered supplier.
- 10.11 However we do not agree with the proposed new incentive scheme. We are in agreement that it would be ideal to have an incentive that worked to incentivise NIE Networks to keep losses from theft as low as possible.
- 10.12 Under the proposed arrangement NIEN would not be incentivised to actively deter theft. Rather it would only be incentivised to identify and stop theft once it has already occurred. So, NIE Networks would earn more money under its proposed scheme if 5% of customers were involved in theft and it identified and stopped half of them compared to it taking active measures to limit theft in the first place to only 2% of customers.
- 10.13 Ideally we would put in place an incentive linked to losses which would in theory put a robust incentive on NIE Networks to stop theft in the first place. However we agree with NIE Networks that such a scheme would be complex and the overall value that can be achieved is unclear.

- 10.14 In considering this issue we are concerned that the level of proactive engagement to prevent electricity theft was not what we would have expected. We do not think the proposal from NIE Networks would address this concern in a strong enough manner.
- 10.15 The UR has two work-streams in place to address the theft of electricity: the meter replacement programme for theft and the Energy Theft Codes of Practice.
- 10.16 The meter replacement for theft programme targets premises suspected of energy theft. We have agreed a volume of 20,000 meters at a unit price of £117 for this work-stream. The unit costs of £117 are higher than a standard keypad installation of £73.66. The higher costs for a meter replacement for theft meter are to cover the additional RPU overheads for this type of work.
- 10.17 In addition the Energy Theft Codes of Practice aim to protect consumers from the safety issues and costs related to energy theft. To do this we propose to use the Energy Theft CoP to provide transparency on the obligations on electricity and gas distribution network operators and suppliers to work together to establish and implement detailed and best-practice industry procedures to prevent, detect and investigate energy theft.
- 10.18 The Energy Theft Codes of Practice is re-structuring and improving activities that are already being carried out. We do not expect that this will lead to any additional costs. If roles and responsibilities are clarified and procedures are streamlined across the sectors we would expect that this could reduce overall costs.
- 10.19 We have proposed an Energy Theft Compliance Report within our Energy Theft Code of Practice consultation. This proposal will require NIE Networks to set out its view on electricity theft levels/issues and what actions it is proactively taking to prevent theft.

11 Transactional Services

NIEN Submission

- 11.1 Transactional Services refers to the provision by NIEN of services to suppliers in support of the competitive retail market. These charges apply to metering fieldwork services (e.g. de-energisation or re-energisation of supplies) and to a range of non-fieldwork activities (e.g. registration cancellation or provision of additional customer consumption data).
- 11.2 Costs relate to (i) the direct cost of staff dispatched to undertake fieldwork; and (ii) the indirect cost of office-based administrative staff involved in organising activities and interfacing with suppliers and customers.
- 11.3 Income is derived from charges applied to each supplier on the basis of the specific transactional services that supplier has requested and the approved transactional charge for each service.
- 11.4 NIEN's submission in relation to transactional charges is also set out below in Table 31.

Table 31: NIEN submission for charges and income relating to Transactional Service

Transactional Services	Oct 17- Mar 18	Apr18 Mar19	Apr19 Mar20	Apr20 Mar21	Apr21 Mar22	Apr22 Mar23	Apr23 Mar24	RP6 Total
Transactional Charges	0.15	0.30	0.30	0.30	0.30	0.30	0.30	1.93
Transactional Income	-0.36	-0.71	-0.71	-0.71	-0.71	-0.71	-0.71	-4.62

UR Response

- 11.5 We have reviewed the costs and revenues provided in the RIGS data relevant to Transactional Charges. Our draft determination is based on the average of the actual costs incurred over 2013-2016 period. The RIGS data is set out in Table 32 below. The RIGS data for Transactional Charges is slightly higher than that which has been submitted by NIEN. As per our approach we have accepted NIEN's submission.
- 11.6 Transactional Income is in line with NIEN's submission. Overall there is no difference. Our draft determination is set out in Table 33.
- 11.7 We do however note that the income from transactional charges are higher than the costs to deliver the service which raises concerns over suppliers being overcharged. We are seeking further information on NIEN to explain the variation between the income and charges.

Table 32: RIGS data for charges and income relating to Transactional Services

Transactional Services	Oct 17- Mar 18	Apr18 Mar19	Apr19 Mar20	Apr20 Mar21	Apr21 Mar22	Apr22 Mar23	Apr23 Mar24	RP6 Total
Transactional Charges	0.18	0.36	0.36	0.36	0.36	0.36	0.36	2.33
Transactional Income	-0.36	-0.71	-0.71	-0.71	-0.71	-0.71	-0.71	-4.62

Table 33: UR draft determination for charges and income relating to Transactional Services

Transactional Services	Oct 17- Mar 18	Apr18 Mar19	Apr19 Mar20	Apr20 Mar21	Apr21 Mar22	Apr22 Mar23	Apr23 Mar24	RP6 Total
Transactional Charges	0.15	0.30	0.30	0.30	0.30	0.30	0.30	1.93
Transactional Income	-0.36	-0.71	-0.71	-0.71	-0.71	-0.71	-0.71	-4.62