Jemena Electricity Networks (Vic) Ltd

2016-20 Electricity Distribution Price Review Regulatory Proposal

Attachment 11-5

User-requested services explanatory statement

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ABBREVIATIONS

AER	Australian Energy Regulator
AMI	Advanced Metering Infrastructure
B2B	Business to Business
CTs	Current Transformers
HV	High Voltage
JEN	Jemena Electricity Networks (Vic) Ltd
MSATS	Market Settlement and Transfer Solutions
NEM	National Electricity Market
O&M	Operational and Maintenance
REC	Registered Electrical Contractors
SO	Service Order
SRA	Safety Risk Assessment

OVERVIEW

1. Along with network electricity distribution services, Jemena Electricity Networks (Vic) Ltd (**JEN**) provides additional services which are also subject to economic regulation. These services are known as alternative control services and include:

   - Connection services – details and pricing are set out in sections 2 and 3.
   - Ancillary services – details and pricing are set out in sections 4 and 5.
   - Metering services – details and pricing are set out in section 6.
   - Public lighting services – charges for public lighting services attached to shared network assets are detailed in Attachment 11–3. [Charges for public lighting services on dedicated public lighting assets are subject to negotiations with the public lighting customers in accordance with our negotiating framework (see Attachment 11–1)].

2. The majority of these services are charged on a fixed fee basis due to the relatively standardised nature of the activities undertaken and the consistent costs incurred to provide these services. Other services however, have costs that vary significantly between jobs; for these services JEN will provide job specific prices based on labour materials, plant and contractors costs, with the labour component regulated on a per hour basis for each type of labour used.

1. METHOD FOR DERIVING CHARGES

3. JEN proposes to apply fixed prices for most of the user-requested services that are classified as alternative control services. For the remaining services, prices will be determined by way of a cost pass-through using the labour rates approved by the AER along with, material, plant and contractor costs.

4. JEN proposes:

   - CPI-X price cap for all fee based user-requested services
   - CPI-X price cap on labour rates for quoted user-requested services
   - A revenue cap for metering type 5 and 6 and smart meter provision and meter data services

5. JEN has adopted a bottom-up approach to develop prices for most fee based connection and ancillary services. For reserve feeder services the charge is determined on a top-down approach.

6. In deriving the proposed charges for connection and ancillary services, JEN has utilised a method that passes on its forecast costs for providing these service. These costs consist of:

   - The charges it pays to service providers
   - Back office and other direct costs
   - An allocation of JEN's indirect costs (overheads) plus material costs.

7. We have engaged independent experts to provide real cost escalators[1] to develop real price escalators to be used in the X-factor calculation. The methods we employ are consistent with AER's methodology in its recent determinations.

8. The method for deriving charges for fee-based connection, metering and ancillary services are described in the relevant sections of this attachment and shown in the cost model in Attachment 11-4.

[1] Refer to Chapter 8 and Attachment 8-8 for more details.

2. CONNECTION SERVICES (FEE-BASED)

9. This category of services includes routine connection services commonly requested by residential and small business customers. These include:

- Routine connection up to 100 amps
- Temporary supply connection up to 100 amps
- Manual energisation and de-energisation
- Reconnection after temporary disconnection for non-payment
- Remote de-energisation and re-energisation

2.1 ROUTINE CONNECTIONS UP TO 100 AMPS

10. A routine connection service is a new permanent connection that involves minimal, or no augmentation or extension, of the distribution network. The connection may be a single or three-phase with a capacity up to 100 amps that is either:

- A standard overhead connection that complies with the technical standards set out in the Victorian Service & Installation Rules. A standard overhead connection is a single span electricity connection from an existing distribution pole where the length of the cable and property crossing is not excessive
- An underground connection from a service pit already installed by a real estate developer at the customer's property boundary.

11. Our proposed prices for routine connections are developed using a bottom-up approach. We can identify various costs associated with the provision of routine connections up to 100 amps[2] and attribute these to the individual customers who receive these services. These are:

- Costs incurred by JEN under field services agreements with contractors
- Material costs
- Back office costs
- Other direct costs
- Overheads
- Tax.

12. Supply connection work comprises various tasks which are performed by a two-person crew. The crew also installs the meter. If the meter is not installed, the crew member responsible for installing the meter will not be fully utilised. Consequently, there are no coast savings by JEN when a third party installs a meter. Hence the

[2] Three-phase 415 Volts.

proposed fees are the same regardless of whether JEN or a third party meter provider is the responsible for metering[3].

13. The proposed connection fees do not include the material cost of the meter, which is captured in the metering asset base.

14. The proposed routine connection fees and real price change for escalation of costs are set out in Table 7–1 and Table 7–2.

2.1.1 COSTS INCURRED BY JEN UNDER FIELD SERVICES AGREEMENTS

15. Under the field services agreements, JEN incurs blended business and after hours costs on a connection basis. These include the contractor's cost for providing labour, motor vehicle and plant to install the connection, the cost of loading the truck with materials from JEN's stores depot, travel to the job site plus the contractor's overheads. The contractor's charges to install a connection do not include material costs.

2.1.2 KEY CONSIDERATIONS

16. The 2010 final price determination for JEN allowed 67.5 minutes per linesperson, for a field crew comprising two linesperson in the cost build-up model,[4] to undertake the connection tasks. Under the terms of our current agreement, the average time to connect a new supply is longer now than it was five years ago due to a number of factors, including:

- The average travel time to job sites has increased due to greater traffic congestion
- JEN's focus on the contractors' safe work practices through field audits has increased. Typically, for each new supply connection the crew is required to:
  - Conduct a job safety risk assessment (**SRA**) of the surrounding conditions at each worksite and record the requisite information in the SRA document before commencing work
  - Assess the traffic condition at the particular site and apply the appropriate traffic management plan in accordance with the Code of Practice[5]
  - Setup required traffic management equipment for vehicle and pedestrians and record information in the SRA document
  - Appraise safe work method for the particular task and record information in the SRA document
  - Set up plant, equipment and tools to undertake the works including test equipment for mandatory Victorian Electricity Safety Industry testing[6]
  - Leaving the work site in a safe condition including packing up all the tools and traffic management equipment.

17. The contractor's charges to JEN to complete a service connection are shown in the cost build-up model in Attachment 11-4.

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3 This approach to apply the same fee, regardless of whether JEN installs a meter or not, was approved in the 2010 final price determination.

4 AER, *2010 final price determination, JEN ACS cost build-up model – final decision*

5 *Code of Practice, Worksite Safety–Traffic Management*, gazetted in August 2010 under the *Road Management Act 2004* http://www.gazette.vic.gov.au/gazette/Gazettes2010/GG2010S351.pdf

6 Victorian Distribution Businesses, *Service and Installation Rules 2014*, section 5.2.2

2.1.3 MATERIAL COSTS

18. JEN supplies the contractor with all the materials necessary for a new supply connection. Materials include supply cable (average length of 30 metres), clamps, connectors and neutral tags. The materials cost for a single-phase connection is on average $78.70 and $92.20[7] for a three-phase connection. The cost of meters is not included in the proposed materials cost.

2.1.4 BACK OFFICE COSTS

19. JEN's back office labour rates have been calculated based on a top-down approach. The back office services are provided by a mix of employees comprising of JEN staff and external contractors. To develop the back office labour rate, we collated the invoiced costs of our contractors and the direct costs of JEN support staff involved in performing the relevant user-requested services[8] for the 2014. The total cost was divided by the total hours worked by the back office staff in performing the user-requested services, which yielded an average back office labour rate of $84.6 per hour. The labour rate is exclusive of JEN overheads.

20. Table 2–1 sets out the end-to-end back office tasks, and average duration of the tasks, necessary to complete a new connection request. The back office effort is estimated to be the same for a single-phase or three-phase connection.

Table 2–1: Back office tasks and duration for a routine connection

Back office tasks	Task Duration (minutes)
Check and validate B2B service order (SO)	9
Accept B2B SO	5
Reject B2B SO (if required)	4.5
Schedule appointment as required	7.5
Create SO in SAP	6.5
Send SO to contractor	5.6
Close SO in SAP	7.5
Manage system exceptions, errors and reporting	12.6
Manage phone calls and inquiries	9.4
Administration of Inbox emails, correspondences	9
Staff training, team meetings and routine business reporting	8
Total	**84.6**

18. JEN has undertaken a detailed analysis of the various tasks performed by the back office staff in delivering the various user-requested services. Our analysis indicate that the back office staff spend more time to complete an end-to-end routine new connection service request than the 60 minutes allowed for by the AER in the 2010 final price determination[9]. We have provided further explanations below.

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7 $2015 in 2016.

8 Classified as fee-based and quoted alternative control services.

9 AER, *2010 final price determination, JEN ACS cost build-up model – final decision*.

Management of phone calls and inquiries

19. A significant amount of time of back office staff is spent on managing phone calls and inquires, and responding to emails. Unlike other fee based user-requested services, new and temporary connection requests generally require greater attention due to their relative complexity. Back office staff frequently respond to phone calls and inquiries from registered electrical contractors (**REC**) ranging from technical standards and metering requirements, to business to business (**B2B**) service orders that have not been received from their retailer. These types of inquires take a significant time to resolve and they must be responded to so that connection timeframe obligations are met.[10]

20. Back office staff also spend time responding to inquiries from JEN's contractors on a range of matters including information on a retailer's service order that may be incomplete and/or inaccurate, site access issues, etc. These calls regularly involve a long waiting period. Our office staff attempt to resolve many of these issues by phoning retailers, RECs and our service provider to avoid returning to the worksite, which would involve a higher cost to serve – that is, the connection applicant may have to pay an additional truck visit charge.

Administration of email correspondences

21. Back office staff also receive emails relating to new connections on a range of matters that are similar to those covered above. Parties resort to email correspondence when issues are not resolved over the phone. Email correspondence comprises managing service orders—including explanation, mismatch of paperwork relating to certificates of safety, electrical work requests, solar connection applications—and reissue of service orders to complete original connection requests.

Manage system exceptions and errors and ensure new connection details are published in the NEM

22. Back office staff now manage a greater number of system exceptions following the introduction advanced metering infrastructure (**AMI**) meters. Typically, after an installation of a new connection, the AMI network management system registers the meter as an active connection in JEN's IT system. The customer details are then automatically sent to the National Electricity Market (**NEM**) within a set period of time, which is a requirement under Market Settlement and Transfer Solutions (**MSATS**) procedures. When this does not occur within the required time period, the IT system sends out alerts notifying that there is a process issue between the systems which may be due to incomplete data or incorrect meter status. System alerts require investigation, corrective actions and closeouts.[11]

23. It may be that the newly installed AMI meter in the field has not communicated with the IT systems. These system exceptions need to be investigated to ensure that the meter and SAP system finally communicate, and the new connection details are published in the NEM. Sometimes there are errors because of mismatch between the AMI meter identification and the network tariff assigned to the new connection.

24. This level of AMI IT system reliance, sophistication and validation were absent at the time of the 2010 final price determination. We wish to emphasise that the back office staff are spending comparatively more time processing new connection now than pre-AMI implementation.

25. JEN has placed great emphasis on customer service in response to customer needs and minimising customer complaints as it is economically more efficient to resolve the root cause than undertake costly corrective action.

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10 ESCV, *Electricity Distribution Code*, May 2012.

11 Full automation is cost prohibitive

2.1.5 OTHER DIRECT COSTS, OVERHEADS AND TAX RECOVERY

26. Other direct costs incurred in providing this service include costs of managing the back office service contract, general management of back office staff including staff training, performance monitoring and reporting. These costs are shown in the cost build-up model in Attachment 11-4.

27. JEN has applied an overhead rate of 5.1% to fee based user-requested services that are operating in nature based on standard JEN overhead rates. This rate recovers costs associated with managing people (e.g. training) and property (e.g. rent, maintenance) that are not directly allocated to the services.

28. For fee-based user-requested services that are capital in nature, we have applied an incremental overhead rate of 20.05% based on JEN's standard overhead rates. This incremental rate recovers additional corporate costs (e.g. IT, HR, safety, environment, quality control) that are capitalised.

29. In addition to the incremental overhead rate, we have applied a rate of 5.35% to fee based user-requested services that are capital in nature to recover the net income tax liability on fees received. This liability arises because, unlike for opex, most tax deductions for capex are spread out over a period of time—so there is a net tax liability in net present value terms[12].

2.2 TEMPORARY SUPPLY CONNECTION UP TO 100 AMPS

30. A temporary supply connection with a capacity up to 100 amps (single or three-phase) is provided where supply is requested for a known limited period of up to 12 months. Temporary supplies may be provided for such purposes as:

- Construction of buildings and roads
- Mobile services, such as health services and X-ray vans
- Events such as carnivals, fetes and festivals.

31. The effort involved and cost in providing a temporary supply connection up to 100 amps is comparable to a new routine connection service, except that the connection has to be abolished at a later date when the supply is no longer required. Accordingly, JEN's cost build for this service is same as for routine connection up to 100 amps (detailed in section 2.1) in all aspects, except that we have included lower material costs as some of the materials (e.g. brackets) from previous temporary supply connection can be re-used.

32. JEN's proposed temporary supply connections fees and real price change for escalation of costs are set out in Table 7–1 and Table 7–2.

2.3 MANUAL ENERGISATION AND DE-ENERGISATION

33. Manual energisation services are provided to retailers on behalf of customers moving into new premises. Manual re-energisation services are provided to retailers on behalf of customers moving into existing premises that have previously been de-energised. Both these services normally involve fuse insertion, which requires a site visit.

[12] For further details on how we applied the tax recovery, please refer to Attachment 11-4.

34. Manual de-energisation services are provided where customers or retailers request power to a premise to be turned off and the fuse removed. De-energisation requests from retailers mainly relate to customers moving out of a premise or disconnection for non-payment of an electricity bill.

35. About 98% of the residential and small business customers in JEN's distribution area have smart meters. Therefore, retailers generally request remote energisation and de-energisation services. There are however unmetered connections and metering installations that do not have remote service capabilities. These sites still rely on manual de-energisation and re-energisation services.

36. Normally manual energisation, de-energisation and re-energisation services are performed by a single person operating out of a van. Requests received prior to 3:00 pm incur a 'business hours' fee while 'after hours' fees apply to requests received between 3:00 pm until 9:00 pm. However, there are circumstances where a service truck visit may be required instead of a van and in such cases a service truck visit charge will be applied. Some examples where a service truck visit may be required include:

- After 9:00 pm service request when the single-person resource is not available
- No access to distribution equipment (metering installation, supply fuse)
- No isolation point (e.g. fuse box) and the disconnection or reconnection of the supply has to be performed at the pole
- Multiple connection points fused at a common isolation point
- Metering sites that have current transformers (**CTs**)
- Isolation point in a restricted area – e.g. substations, above verandas etc.

2.3.1 APPROACH TO DETERMINING PRICES

37. Our proposed charges cover manual energisation and re-energisation of basic overhead or underground supplies with a capacity up to 100 amps. The charge includes recovery of various costs incurred by JEN that can be categorised into the following key components:

- Contractor costs
- Back office costs
- Other direct costs and overheads.

38. External contractor and back office costs are discussed below. Other direct costs and overheads are discussed in section 2.1.5.

2.3.2 CONTRACTOR COSTS

39. JEN has a contract with an external contractor for removing and inserting fuses. De-energisation requests from retailers mainly relate to customers moving out of premises or disconnections for non-payment of an electricity bill. The contractor's cost for a fuse removal is higher than for a fuse insert. That is because the removal of a fuse takes longer on average due to time taken in discussions with disgruntled customers being disconnected for non-payment.

2.3.3 BACK OFFICE COSTS

40. The back office functions for manual energisation and re-energisation services are provided by the same group of back office staff described in section 2.1.4. The back office functions for manual de-energisation is similar to

that of manual energisation except that more checks are required by the back office staff to ensure strict compliance with regulatory obligations relating to life support customers.

41. Table 2–2 sets out the end-to-end back office tasks, and the average duration to carry out each of the tasks, necessary to complete a manual energisation and re-energisation request.

Table 2–2: Back office tasks and duration for a manual energisation (or re-energisation)

Back office tasks	Task Duration (minutes)
Check, validate and accept B2B service order (**SO**)	3.0
Create SO in SAP and send it to the contractor	2.3
Close SO in SAP after the contractor has completed SO	3.9
Manage system exceptions, errors and reporting	3.5
Total	**12.7**

Table 2–3: Back office tasks and duration for a manual de-energisation

Back office tasks	Task Duration (minutes)
Check, validate and accept B2B SO	3.0
Create SO in SAP and send it to contractor	2.3
Close SO in SAP after contractor has completed SO	3.9
Manage system exceptions, errors and reporting	7.5
Raise Trouble Order in Outage Web	5.0
Total	**21.7**

41. The proposed fees and real price change for escalation of costs are set out in Table 7–1 and Table 7–2.

2.4 RECONNECTION AFTER TEMPORARY DISCONNECTION FOR NON-PAYMENT

42. This service is provided to retailers on behalf of customers. It is a manual reconnection service after temporary disconnection for non-payment. The service is similar to an energisation (or re-energisation) service which requires a field visit to insert a fuse, except that the work is performed on the same business day, if the reconnection request is received before 3:00 pm.

43. Our proposed charge includes recovery of various costs including contractor costs, back office costs and other direct costs and overheads. These costs are similar to the manual energisation (or re-energisation) services, except that that they are higher to reflect the incremental costs of re-scheduling work at short notice compared to the regular re-energisation services.

44. We also incur a higher cost from our contractor because of the ‘same day reconnection’ obligation compared to the regular energisation (or re-energisation) work which can be performed the next day by agreement. The contractor’s charges to JEN are outlined in the cost build-up model in Attachment 11-4.

45. The proposed fees and real price change for escalation of costs are set out in Table 7–1 and Table 7–2.

2.5 REMOTE DE-ENERGISATION AND RE-ENERGISATION

46. The functionality provided is identical to manual energisation, re-energisation and de-energisation services. However, the underlying costs of the service are different, as it is provided remotely through the smart meter instead of a field visit to manually remove or insert a fuse.

2.5.1 BUILD-UP OF FEES

47. Our proposed fees apply to remote energisation and re-energisation of supply to residential and small business customers who have JEN provided smart meters. The charge includes recovery of various costs that can be categorised into the following key cost components:

- Back office costs
- Other direct costs and overheads.

48. The back office costs are discussed below. Other direct costs and overheads are discussed in section 2.1.5.

2.5.2 BACK OFFICE COSTS

49. The back office functions for remote energisation and re-energisation services are provided by the same group of back office staff described in section 2.1.4. Whilst the bulk of the services orders are processed by our IT systems, there are instances – such as checking for sensitive loads or complex sites – where manual back office interventions are required to manage system exceptions, particularly where requests are received for sites registered as having life support customers.

Table 2–4: Back office tasks managing system exceptions of remote services (minutes)

Back office tasks	Task Duration
Manage system exceptions (e.g. life support customers)	6.0

50. The proposed fees and real price changes for escalation of costs are set out in Table 7–1 and Table 7–2.

3. CONNECTION SERVICES (QUOTED)

51. The scope and costs of certain types of connection services vary significantly between jobs due to the variability of labour, material, plant and contractors used to deliver the service. For these types of services, JEN proposes to provide individual quotes for those service requests based on the AER approved labour rates plus the costs of material, plant and contractors.

52. JEN proposes to provide individual quotes for the following connection services.

- routine connections that are greater than 100 amps and above
- supply abolishment that is greater than 100 amps.

53. For each of the services, JEN proposes a CPI-X price cap on labour rates plus others costs as shown below.

3.1 ROUTINE CONNECTION SERVICES ABOVE 100 AMPS (AUGMENTATION NOT REQUIRED)

54. A new permanent connection service with a capacity above 100 amps may be provided to customers (excluding embedded generators) provided there is sufficient network capacity in the low voltage network and the connection service involves minimal or no augmentation of the shared distribution network.

55. The connection may be an overhead connection that complies with the technical standards set out in the Victorian Service & Installation Rules.

56. JEN will provide the connection applicant with a quote for the installation of the connection. The charge for the connection will include:

a) Labour cost for the installation of the connection

b) Materials (cable, brackets, fuses, connection boxes etc.) and plant (generally an elevating platform vehicle)

c) Current transformers for metering

d) Testing of energisation of the connection

e) Back-office costs to process connection.

3.2 SUPPLY ABOLISHMENT THAT IS GREATER THAN 100 AMPS

57. A charge will be applied to customers who request abolishment of supply services that are greater than 100 amps. The work generally involves permanent removal of JEN's connection assets on a customer's property – for example, substation, cables, etc.

4. ANCILLARY SERVICES (FEE BASED)

58. This category of services involves JEN dispatching a service truck with a two-person crew to a site to perform work requested by customers, retailers and contractors. There are three types of service truck attendance:

- Service truck visit
- Wasted service truck visit
- Fault response – not a fault on JEN's assets

4.1 SERVICE TRUCK VISIT

59. Service truck visit charges apply whenever a customer, retailer or contractor requests attendance of a service truck (except in emergency situations and fault calls) to perform works that typically take around half an hour on site. Examples where a service truck visit is required are as follows:

- De-energisation or re-energisation of supplies that are greater than 100 amps
- Temporary disconnection and reconnection requiring the supply isolation at the top of a pole or above a shop veranda
- Minor supply alterations, additions and upgrades
- Meter additions or alterations.

4.1.1 APPROACH TO DETERMINING PRICES

60. Our proposed charge covers the end-to-end process for dispatching a service truck to a site. The charge includes recovery of various costs incurred by JEN that can be categorised into the following key components:

- External contractor costs
- Back office costs
- Other direct costs and overheads.

61. The external contractor costs and back office costs are discussed below. Other direct costs and overheads are discussed in section 2.1.5.

4.1.2 COST INCURRED BY JEN UNDER FIELD SERVICES AGREEMENTS

62. Under JEN's field services agreement, JEN incurs costs on a per truck visit basis. These cover the contractor's cost of providing labour, motor vehicle, and travel to the job site, plus the contractor's overheads. The contractor's charges to JEN are shown in the cost build-up model in Attachment 11-4.

4.1.3 BACK OFFICE COSTS

63. The back office functions for service truck visits are performed by the same back office staff described in section 2.1.4. JEN's back office labour rates are based on a top-down approach and our method of determining the charge is described in section 2.1.4.

64. JEN has undertaken a detailed analysis of the various tasks performed by the back office staff in completing an end-to-end service truck visit request. Our analysis indicates that the actual time spent by our back office staff is significantly more than the 45 minutes allowed by the AER in the 2010 final price determination[13]. Table 4–1 sets out the end-to-end back office tasks and the duration of the tasks necessary to complete a service truck visit request.

Table 4–1: Back office tasks and duration for truck visit charge

Back office tasks	Task Duration (minutes)
Check and validate B2B service order (SO)	9
Accept B2B SO	5
Reject B2B SO (if required)	4.5
Schedule appointment as required	7.5
Create SO in SAP	6.5
Send SO to contractor	5.6
Close SO in SAP	7.5
Manage system exceptions, errors and reporting	5.7
Manage phone calls and inquiries	7.4
Administration of Inbox emails, correspondences	6
Staff training, team meetings and routine business reporting	8
Total	**72.7**

62. The proposed fees and real price for escalation of costs are set out in Table 7–1 and Table 7–2.

4.2 WASTED SERVICE TRUCK VISIT

63. JEN proposes that a wasted service vehicle visit charge apply to requested service vehicle visits attended by JEN where on arrival, it is found that the customer or contractor is not ready for the scheduled work—that is, the required preparations have not been made and the intended activities cannot be performed, the site is not safe, or JEN's attendance was not required. JEN also proposes that a wasted truck visit charge also apply if less than 24-hour notice is given to cancel a pre-arranged visit.

64. Under JEN's field services agreement, JEN incurs costs on a per wasted service truck visit basis, which is lower than a service truck visit. They include the contractor's cost of providing labour, motor vehicle and plant plus overheads.

65. In all instances of wasted service truck visits, the back office would have dispatched a crew in response to a service order request by a retailer or a customer. The effort and back office resources expanded would be essentially the same as for a completed truck visit service, except that the service order would be closed out with an explanation as to why the truck visit request order was not fulfilled, which may take marginally longer to close out.

66. The proposed fees and real price change for escalation of costs are set out in Table 7–1 and Table 7–2.

[13] AER, *2010 final price determination, JEN ACS cost build-up model – final decision*

4.3 FAULT RESPONSE – NOT A FAULT ON JEN'S ASSETS

67. JEN will charge a fault response fee to a customer's retailer in circumstances where the customer has called JEN's control room advising that they are without power and upon arrival, the fault crew finds the customer has not checked that the main switch or safety switch is turned on, or power outage at the premises is due to a faulty wiring in the customer's electrical installation or faulty third party meter.

68. Before the faults crew is dispatched, the control room staff would advise the customer that if the cause of the power outage is on the customer's side of the supply point, then the customer is responsible for rectifying the fault and that we may charge a wasted fault response. Customers will not be charged when a faults crew is required to attend emergency fault calls, unless the customer is clearly at fault.

5. ANCILLARY SERVICES (QUOTED)

69. The scope and costs of providing certain types of ancillary services vary significant between jobs due to the variability of labour, materials, plant and contractors used to deliver the service. With the exception of the reserve feeder maintenance service, JEN proposes to provide individual quotes for those services.

70. For the reserve feeder maintenance service, JEN proposes to apply a maintenance rate ($/kW) to the reserve feeder capacity signed-up by the customer. The charge for the maintenance of reserve feeder services is based on a top-down approach (see section 5.4).

5.1 DESCRIPTION OF ANCILLARY QUOTED SERVICES

71. JEN proposes to apply a quoted charge to following ancillary services:

- Temporary cover of low voltage wires – a quoted service charge will be applied to customers or contractors who request covering of service cable or low voltage power lines for safety reasons, for example, if those power lines that are close to a construction site. The charge will depend on the time taken to install and remove the covers, plus the rental costs of the covers for duration of time the mains are covered.
- Elective undergrounding – a quoted service charge will be applied to change an existing overhead electricity supply to an underground supply.
- Rearrangement of network assets at a customer's request (excluding alterations and relocation of public lighting assets).
- Damage to overhead service cables cause by high load vehicles – a quoted service charge will be applied to an identifiable third party when overhead service cables require repair due to the damage caused by the by high load vehicles.
- High load escorts – a quoted charge will be applied to a person requiring lifting of overhead services to allow high load vehicles to safely pass along roads.
- After hours truck appointment – a quoted service charge will be applied to a customer, retailer or contractor that requests attendance of a service vehicle by appointment after hours. Examples of situation where a service truck attendance is required are as follows:
  - De-energisation (fuse removal) and or opening an isolator where supply is greater than 100 amps
  - Supply alteration, additions and upgrades
  - Other related distribution network work undertaken by JEN due to a customer's request
- Auditing design and construction – a quoted service charge will be applied where a customer requests JEN to audit a design or construction works undertaken by a customer or a third party in relation to a connection service.
- Specification and design enquiry – a quoted service charge will be applied to a customer where a customer requests JEN to provide information to assist them to undertake feasibility studies, designs or to provide budget estimates.

5.2 PRICING OF QUOTED SERVICES

72. JEN proposes to charge for this service based on the AER approved labour rates plus the costs of materials, plant (e.g. use of vehicles, equipment and machinery) and contractor services.

73. The contractor services include all costs associated with the use of external labour including plant used in the provision of the service. Direct costs incurred by JEN as part of performing the service—for example, traffic management costs, and permits for road closure—will also be passed on to the customer at cost.

74. Materials including store handling—material storage, logistics and overheads—incurred in the provision of the service will be passed on to the customer.

75. The labour rates are those rates proposed in Table 5–1.

5.2.1 PRICING OF RESERVE FEEDER MAINTENANCE SERVICES

76. For reserve feeder maintenance service, JEN proposes to apply a maintenance rate ($/kW) based on the customer's reserve feeder capacity. The charge for the maintenance of reserve feeder services is calculated based on a top-down approach (see section 5.4).

5.3 LABOUR CHARGE RATES FOR QUOTED SERVICES

77. JEN proposes the maximum hourly labour rate as set out in Table 5–1 and real price escalation set out in Table 5–2. The proposed back office rate is the same rate that is used to derive the proposed fee-based user-requested services. For details on rate development, see section 2.1.4.

78. JEN proposes to set the hourly charge rate for a linesperson by escalating the approved 2015 lineperson rate using JEN's forecast labour escalators in Attachment 8-8.

79. Our proposed technical officer and engineer labour rates for quoted services are based on the average labour rates of our technical officers and engineers who primarily work in the areas of auditing design and construction works and providing advice and information design specifications. The rate is developed based on the average labour rates plus on-costs (including long service, WorkCover premiums, payroll taxes and super guarantee charges) and overhead rate of 5.1%.

Table 5–1: Proposed labour rates for quoted services ($2015)

Classification	Proposed 2015 labour rates	
	Business Hours	After Hours
Back office / administration	82.33	-
Linesperson / field worker	102.11	126.40
Technical officer	141.30	165.35
Engineer	183.83	201.24

Table 5–2: Proposed real changes to the labour rates for quoted ancillary services for the 2016 regulatory period (per cent)

Ancillary services	2016	2017	2018	2019	2020
Back-office	0.88	1.35	1.76	2.11	1.81
Linesperson	0.88	1.35	1.76	2.11	1.81
Technical Officer	0.88	1.35	1.76	2.11	1.81
Senior engineer	0.88	1.35	1.76	2.11	1.81

5.4 RESERVE FEEDER MAINTENANCE RATES

80. JEN proposes classifying maintenance of reserve feeder service as a quoted alternative control service. We propose to apply a maintenance rate ($/kW) based on a customer's reserve feeder capacity.

5.4.1 CALCULATION OF RESERVE FEEDER MAINTENANCE CHARGE

81. In order to estimate the cost associated with the reserve feeder service, JEN has adopted the following approach:

- Step 1 – Activity cost centres were identified in JEN's operational works program which are related to the provision of operational and maintenance (**O&M**) service for high voltage (**HV**) network supplying electricity to customers. This included reserve feeder service customers
- Step 2 – Activities were apportioned to HV distribution system by taking into consideration the volume of HV assets deployed – for example, the number of HV poles, length of HV conductors, HV system operations and faults – as a percentage of the total network assets and the percentage of system operations and faults related to HV system, which is where reserve feeder services are normally provided
- Step 3 – The HV distribution activities were then applied to the costs of the activities to derive the estimated cost of the O&M service for HV distribution
- Step 4 – These costs were then divided by the system demand forecast (kW) to derive the estimated rate ($/kW) for the O&M service for HV distribution
- Step 5 – The estimated cost of the HV distribution activities is divided by the system demand forecast in 2014

82. For calendar year 2014, steps 1, 2 and 3 are shown in Table 5–3.

Table 5–3: Estimation of operating expenditure of high voltage distribution for reserve feeder system

Step 1 - Activity	Step 2 - Proportion of O&M costs attributed to HV distribution system (per cent)	Step 3 - Estimate of O&M cost of HV distribution system ($2014)
Thermovision survey	90%	$142,830
System operations	36%	$2,026,777
Planned maintenance of zone substations	100%	$2,259,269
Unplanned maintenance of zone substations	100%	$895,096
Overhead line maintenance	45%	$211,564
High voltage installation maintenance	50%	$760,768
Pole and line inspection	37%	$660,734
Maintenance of high voltage underground cable	100%	$106,220
Fault and emergency	17%	$1,254,801
Vegetation control	45%	$2,273,784
Total estimate cost of O&M relating to high voltage distribution system		**$10,591,843**

83. The total estimated cost / actual system demand = $10,591,843 / 812,248 kW = $13.04/kW ($2014)

84. JEN's proposed fees and real price changes for escalation of costs are set out in Table 7–1 and Table 7–2.

6. METERING SERVICES

85. Metering services include a range of activities including compliance with metrology procedures as outlined in chapter 7 of the NER. In Attachment 5-1, we propose classifying metering into:

- Regulated metering services for type 5, 6 and smart meters including operation of type 7 metering installations, and
- Unregulated metering services for type 5, 6 and smart meters.

JEN has rolled out AMI meters to residential and small businesses customers consuming less than 160 MWh/annum. However, there are still a number of residual legacy non-AMI meters (<2% of the meter population) still in service. Most of the metering services we provide relate to AMI meters.

6.1 REGULATED METERING SERVICES FOR TYPE 5, 6 AND SMART METERS

86. Regulated metering services include those services that were previously governed by the AMI CROIC but now transition[14] to chapter 6 of the NER:

- Installation, operation, repair & maintenance, and replacement of type 5-6 metering installations (including smart meters).
- Collection of meter data, processing and storage of meter data, and provision of access to meter data for type 5-6 metering installations (including smart meters).

87. Meter provision and meter data provision services for regulated metering services for type 5, 6 and smart meters are currently provided as a bundled service and we propose to continue charging this way in the 2016 regulatory period. It outlines the movements in our metering service charges under our proposal for the 2016 regulatory period. The metering charges build-up model for regulated metering services for type 5, 6 and smart meters is in Attachment 6-2.

6.2 ANCILLARY METERING SERVICES

88. In addition to meter provision and meter data provision services for regulated metering services for type 5, 6 and smart meters, JEN provides ancillary metering services on a user-requested basis. We can identify and allocate the costs of providing these services to those customers that request the services. Accordingly, we have proposed fixed prices to deliver these services. This ensures that only those customers that benefit from a service pay for the service. Ancillary metering services include:

- Manual special meter read
- Remote special meter read
- Remote meter reconfiguration
- Re-test of type 5, 6 and smart meters for residential and small business customers, where JEN is the responsible person for metering services

[14] In accordance with the transitional arrangements in cl 11.60.3 of chapter 11 of the NER.

- Operation of type 7 metering.

6.3 MANUAL SPECIAL METER READ

89. Special reads are required to finalise a customer's bill when they transfer between retailers outside the normal meter reading schedule or move out of their premises. We do not expect many requests for manual special meter reads, given more than 98 % of residential and small customers have a smart meter – instead a remote special meter read would be requested.

90. A special read may also be required for the purposes of rendering billing associated with the customer moving in or out of the premise, or to verify the meter reading due to an account complaint. In the latter case, the charge only applies if the original reading is found to be correct.

6.3.1 APPROACH TO DETERMINING PRICES

91. Our proposed manual special meter read charge includes various costs that can be categorised into the following key cost components:

- External contractor costs
- Back office costs
- Other direct costs and overheads

92. External contractor and back office costs are discussed below. Other direct costs and overheads are discussed in section 2.1.5.

6.3.2 CONTRACTOR COSTS

93. JEN has a contract with an external contractor for field services. The cost JEN incurs for a special meter read is shown in shown in Attachment 11-4.

6.3.3 BACK OFFICE COSTS

94. The back office functions for manual energisation and re-energisation services are provided by the same group of back office staff described in section 2.1.4.

95. The back office functions for manual de-energisation are similar to that of manual energisation except that more checks are required by the back office staff to ensure strict compliance with regulatory obligations that relates to life support customers. De-energisation requests from retailers mainly relate to disconnection for non-payment of electricity bill.

96. Table 6–1 sets out the end-to-end back office tasks and average duration to carry out each of the tasks necessary to complete a manual energisation and re-energisation request.

Table 6–1: Back office tasks and duration for a manual special meter read

Back office tasks	Task Duration (minutes)
Check, validate and accept B2B service order (SO)	3.0
Create SO in SAP and send it to contractor	2.3
Close SO in SAP after contractor has completed SO	3.9
Manage system exceptions, errors and reporting	3.5
Total	**12.7**

97. The proposed fees and real price change for escalation of costs are set out in Table 7–1 and Table 7–2.

6.4 REMOTE SPECIAL METER READ

98. Special reads are required to finalise a customer's bill when they transfer between retailers outside the normal meter reading schedule or move out of their premises. A remote special meter read is a fully automated process in SAP and rarely requires manual intervention. JEN proposes not to charge for remote special meter reads in the next regulatory period.

6.5 REMOTE METER RECONFIGUTRATION

99. The remote meter reconfiguration service is provided to a customer through a retailer acting on behalf of the customer who has requested the re-configuration of an AMI meter. Examples of meter configuration include, but are not limited to:

- Reconfiguration of the time of use periods or maximum demand settings in a meter, to align the meter with a tariff change
- Reconfiguration following the installation of a solar installation in order to measure import and export of energy flows
- Re-configuration of load control turn-on/turn-off times.

6.5.1 APPROACH TO DETERMINING PRICES

100. Our proposed fees apply to remote meter reconfiguration service to residential and small business customers who have AMI meters. The charge includes recovery for back office costs and overheads. The back office costs are discussed below. Other direct costs and overheads are discussed in section 2.1.5.

6.5.2 BACK OFFICE COSTS

101. The back office functions for remote AMI meter reconfiguration services are provided by the same back office staff described in section 2.1.4. Whilst the actual reconfiguration of the meter at a customer's premises is performed remotely by the IT systems, the service orders from retailers have to be processed by our back office staff. The average time taken to process a service order end-to-end is 32 minutes as shown in Table 6–2.

Table 6–2: Back office tasks for processing remote meter reconfiguration service orders

Back office tasks	Task Duration (minutes)
Check and validate B2B SO	9
Accept B2B SO	3
Reject B2B SO (if required)	3
Execute remote configuration in SAP	15
Manage exceptions, phone calls and inquiries	2
Total	**32**

103. The proposed fees and real price change for escalation of costs are set out in Table 7–1 and Table 7–2.

6.6 TYPE 7 METERING SERVICE

104. Type 7 metering service relates to the provision of metering data for unmetered supplies to public lights. The energy consumed by the unmetered streetlights is calculated in accordance with AEMO's metrology procedure.

105. The costs for this service have been specifically excluded from the scope of cost recovery and the regulatory framework for AMI. JEN's AIM charges application, as approved by the AER, did not include the recovery of the costs for this service, which are explained above.

106. JEN proposes that the charges be controlled by way of price cap on the actual charge to the customer and the charges be adjusted each year by CPI-X.

6.6.1 METHOD FOR DERIVING PROPOSED CHARGE

107. JEN has adopted a top-down approach to determine the fee for this service. The method for current charges focuses on recovering the approximate cost to JEN of providing the service. JEN's costs of providing this service include:

- An annual audit of the public lighting inventory table, as required by the metrology procedure for type 7 metering
- Meter data transfer to AEMO including back office data validation and business support.

108. These costs are spread over the population of unmetered public lights. No unit costs are used in the calculation of the current charge.

109. The proposed fees and real price change for escalation of costs are set out in Table 7–1 and Table 7–2.

6.7 RE-TEST OF METERING INSTALLATIONS

110. A customer or a retailer on behalf of a customer may request a meter test to verify that the meter is accurately measuring the energy consumption. This generally occurs after an electricity bill complaint by a customer. The current and proposed charges apply to all such testing. However, in the case of proven faulty meters, the charge is waived by JEN.

111. JEN proposes to offer a customer or a retailer on behalf of a customer meter re-test services of metering installations where JEN is responsible for meter provision services. The meter re-test service includes type 5 and 6 and AMI metering installations.

112. JEN has proposed a single price for all meter testing, as the current underlying costs of testing various meters are similar.

6.7.1 APPROACH TO DETERMINING PRICES

113. The development of our proposed fees for meter re-test service for types 5 and 6 and AMI metering installations includes recovery for various costs that can be categorised into the following key cost components:

- External contractor costs
- Back office costs
- Other direct costs and overheads.

114. External contractor and back office costs are discussed below. Other direct costs and overheads are discussed in section 2.1.5.

6.7.2 CONTRACTOR COSTS

115. JEN has a contract with an external contractor to provide meter test services. The cost JEN incurs under the contract for a meter test for types 5, 6 and AMI metering installations is shown in Attachment 11-4.

6.7.3 BACK OFFICE COSTS

116. The back office functions are performed by the same back office staff described in section 2.1.4.

117. Table 6–3 sets out the end-to-end back office tasks and average duration to carry out each of the tasks necessary to complete a meter re-test service request for a type 5, 6 or AMI metering installation.

Table 6–3: Back office tasks and duration for meter re-test service

Back office tasks	Task Duration (minutes)
Check and validate B2B service order (SO)	9
Accept B2B SO	3
Reject B2B SO (if required)	3
Schedule appointment to test meter	6
Create SO in SAP & send SO to Specialist Metering	6
Close SO in SAP	4
Prepare report on the test results and manage exceptions	6
Manage phone calls, inquiries, Inbox emails & correspondences	3
Staff training, team meetings and routine business reporting	2
Total	**42**

118. The proposed fees and real price change for escalation of costs are set out in Table 7–1 and Table 7–2.

6.8 EXIT AND RESTORATION FEES

119. Refer to Attachment 11–6: Metering exit fee application and Attachment 11–7: Metering exit fees model for details on JEN's approach to determining prices relating to the cessation or reintroduction of consuming regulated metering services.

7. SCHEDULE OF FEES FOR USER-REQUESTED SERVICES 2016-20

Table 7–1: Proposed fees for user-requested services ($2015)

Proposed fees	Proposed 2016 Price	
	Business Hours	After Hours
Connection services where JEN is responsible for metering		
Routine single-phase connection to new premises	726.54	726.54
Routine three-phase connection to new premises	930.27	930.27
Temporary single-phase connection	711.56	711.56
Temporary three-phase connection	752.39	752.39
Connection services where JEN is not responsible for metering		
Routine single-phase connection to new premises	726.54	726.54
Routine three-phase connection to new premises	930.27	930.27
Temporary single-phase connection	711.56	711.56
Temporary three-phase connection	752.39	752.39
Energisation and de-energisation services		
Reconnection after temporary disconnection for non-payment	65.59	73.19
Manual energisation (new and existing premises)	34.67	54.97
Manual re-energisation	34.67	54.97
Manual de-energisation	53.55	70.19
Remote de-energisation	9.33	-
Remote re-energisation	0.57	-
Ancillary connection services		
Service vehicle visit	449.09	583.72
Wasted service truck visit - not JEN's fault	418.01	583.71
Fault response - not JEN's fault	449.09	583.72
Reserve feeder charge	14.74	-
Ancillary metering services		
Manual special meter reads	30.99	-
Remote special meter read	No charge	-
Re-test types 5, 6 and AMI smart metering installations	363.32	597.56
Remote meter re-configuration	48.75	-
Type 7 metering (meter data service)	0.57	-

Table 7–2: Proposed real price change for user requested services (per cent)

Proposed real price change	2017	2018	2019	2020
Connection services where JEN is responsible for metering				
Routine single-phase connection to new premises	1.52	1.20	0.20	0.79
Routine three-phase connection to new premises	1.85	1.22	-0.75	0.33
Temporary single-phase connection	1.48	1.19	0.32	0.85
Temporary three-phase connection	1.80	1.22	-0.59	0.40
Connection services where JEN is not responsible for metering				
Routine single-phase connection to new premises	1.52	1.20	0.20	0.79
Routine three-phase connection to new premises	1.85	1.22	-0.75	0.33
Temporary single-phase connection	1.48	1.19	0.32	0.85
Temporary three-phase connection	1.80	1.22	-0.59	0.40
Energisation and de-energisation services				
Reconnection after temporary disconnection for non-payment	1.61	1.51	1.65	1.91
Manual energisation (new and existing premises)	1.61	1.51	1.65	1.91
Manual re-energisation	1.61	1.51	1.65	1.91
Manual de-energisation	1.60	1.51	1.65	1.91
Remote de-energisation	1.62	1.50	1.62	1.91
Remote re-energisation	1.62	1.50	1.62	1.91
Ancillary network services				
Service vehicle visit	1.16	1.16	1.20	1.25
Wasted service truck visit - not JEN's fault	1.16	1.16	1.21	1.26
Fault response - not JEN's fault	1.16	1.16	1.20	1.25
Reserve feeder charge	3.82	1.42	-6.11	-2.41
Ancillary metering services				
Manual special meter reads	1.60	1.52	1.67	1.90
Re-test types 5, 6 and AMI smart metering installations	1.62	1.49	1.61	1.91
Remote meter re-configuration	1.63	1.49	1.61	1.91
Type 7 metering (meter data service)	1.35	1.76	2.11	1.81

8. SCHEDULE OF FEES FOR USER-REQUESTED SERVICES 2011-15

120. JEN's the fees for alternative control services for the 2011 regulatory period are outlined below.

Table 8–1: Fees for user-requested services – business hours (nominal, $dollars)

	2011	2012	2013	2014	2015
User requested distribution services					
Connection – single phase service < 100 amps where JEN is the responsible for metering	408.18	427.39	442.22	460.70	477.56
Connection – three phase service < 100 amps where JEN is the responsible for metering	500.92	523.00	539.34	559.17	577.80
Connection – single phase service < 100 amps where JEN is not the responsible for metering	408.18	427.39	442.22	460.70	477.56
Connection – three phase service < 100 amps where JEN is not the responsible for metering	500.92	523.00	539.34	559.17	577.80
Temporary supply connection	431.82	453.37	470.52	492.38	511.90
Manual energisation of new premises	12.07	12.72	13.27	13.98	14.60
Manual re-energisation of existing premises	12.07	12.72	13.27	13.98	14.60
Manual de-energisation of existing premises	12.07	12.72	13.27	13.98	14.60
Temporary disconnect / reconnect for non-payment	20.62	21.73	22.68	23.89	24.95
Manual special meter read	8.91	9.39	9.81	10.33	10.78
Adjust time switch	11.13	11.74	12.25	12.91	13.49
Service vehicle visit	314.65	331.08	344.48	361.78	377.00
Wasted service vehicle visit (not JEN's fault)	314.16	330.11	342.91	359.34	373.92
Fault response (not JEN's fault)	265.33	279.23	290.61	305.32	318.24
Retest of types 5 and 6 metering installations for first tier customers < 160 MWh	239.73	252.62	263.69	277.69	289.94
Retest of types 5 and 6 metering installations for first tier customers > 160 MWh	239.73	252.62	263.69	277.69	289.94
Reserve feeder - $/kW per annum	4.44	4.68	4.89	5.16	5.39
AMI Meter Charges (per annum per meter) <160 MWh					
Single phase non-off peak per meter per annum	136.70	153.95	173.38	193.82	226.32
Single phase off peak per meter per annum	136.70	153.95	173.38	193.82	226.32
Multi-phase direct connect per meter per annum	167.99	189.19	213.07	238.19	278.12
Multi-phase CT per meter per annum	186.77	210.34	236.88	264.81	308.66
Type 7 metering ($/light per annum)	0.13	0.14	0.14	0.14	0.14

	2011	2012	2013	2014	2015
AMI remote services					
Remote re-energisation	5.27	5.46	5.46	5.46	5.46
Remote de-energisation	5.27	5.46	5.46	5.46	5.46
Remote meter reconfiguration	33.34	34.51	34.52	34.52	34.52
Remote special meter read	1.56	1.61	1.62	1.62	1.62

Table 8–2: Fees for user-requested services – after hours (nominal, $dollars)

	2011	2012	2013	2014	2015
User-requested distribution services					
Connection – single phase service < 100 amps where JEN is the responsible for metering	560.46	585.94	605.23	628.90	650.82
Connection – three phase service < 100 amps where JEN is the responsible for metering	467.79	490.36	508.10	530.34	550.45
Connection – single phase service < 100 amps where JEN is not the responsible for metering	560.46	585.94	605.23	628.90	650.82
Connection – three phase service < 100 amps where JEN is not the responsible for metering	467.79	490.36	508.10	530.34	550.45
Temporary supply – overhead supply with coincident abolishment	479.47	503.75	523.24	548.18	570.34
Manual energisation of new premises	36.40	38.36	40.04	42.16	44.01
Manual re-energisation of existing premises	36.40	38.36	40.04	42.16	44.01
Manual de-energisation of existing premises	41.69	43.94	45.86	48.30	50.43
Temporary disconnect / reconnect for non-payment	41.66	43.90	45.83	48.26	50.39
Service vehicle visit	346.65	365.07	380.25	399.93	417.15
Wasted service vehicle visit (not JEN's fault)	355.82	374.10	388.88	407.89	424.71
Fault response (not JEN's fault)	296.99	312.68	325.56	342.24	356.86
Retest of types 5 and 6 metering installations for first tier customers < 160 MWh	302.63	318.88	332.85	350.51	365.96
Retest of types 5 and 6 metering installations for first tier customers > 160 MWh	302.63	318.88	332.85	350.51	365.96

Table 8–3: Labour rates for quoted user-requested services – business hours (nominal, $dollars)

Labour rates	2011	2012	2013	2014	2015
Unit rate per man hour	84.10	88.73	92.63	97.71	102.11

Table 8–4: Labour rates for quoted user-requested services – after hours (nominal, $dollars)

Labour rates	2011	2012	2013	2014	2015
Unit rate per man hour	104.11	109.84	114.66	120.95	126.40