

## SCOPING STUDY REPORT

# Role of utilities in the subdivision approvals process

JUNE 2018





## Index

Executive Summary	4
1 Service master plan / network scope plan	7
2 Reticulation design and approval (including public lighting)	9
3 Construction management and delivery	11
4 Construction audit processes	13
5 Power tie-in	16
6 Stakeholder relationship management	17
7 Other potential streamlining opportunity referrals	19
Conclusion	19

### APPENDICES

Appendix A1 Land subdivision process flow chart	20
Appendix A2 List of departments & organisations interviewed	21
Appendix B1 Electricity supply to new subdivisions (PowerCor)	22
Appendix B2 Existing generic option 2 process flow chart	23
Appendix B3 Proposed generic option 2 process flow chart	24
Appendix C Comparison of DB contestable vs non-contestable services	25
Appendix D DB comparison for service master plan & reticulation design plan preparation & approvals estimated times & costs	26
Appendix E Developer's project manager (PM2) responsibilities (PowerCor)	27
Appendix F DB audit steps & typical timeline comparison	28
Appendix G Construction audit responsibilities (AusNet)	29
Appendix H Matters for future investigation	30
Glossary	31

## Executive summary

The Victorian Planning Authority (VPA) is committed to pursuing opportunities to streamline the delivery of affordable land for new housing and the creation of employment that accompanies it.

A key VPA focus is the subdivision approval processes in Melbourne's growth area councils, post the Precinct Structure Plan approval processes. Streamlining of approval processes and red tape reduction are central to this focus.

Based on industry feedback, the VPA commissioned this scoping study report as the potential basis for more detailed work.

The study parameters are to examine the role of utility companies in the subdivision approvals process, specifically power utilities. Refer to *Appendix A1 – Land Subdivision Process Flow Chart* for the relationship between subdivision electrical approvals and the planning approvals.

Concurrently, the Department of Treasury and Finance have been investigating any legislative and/or regulatory 'gaps' to address the issue.

On 4 May 2018, the State Treasurer issued a media release announcing the State Government "is taking action to reduce delays in connecting power to new houses, to get more Victorians into homes quicker".

The State Government "has asked the Essential Services Commission (ESC) to investigate the practices of electricity distribution businesses that connect electricity to Victoria's new property developments".

"The ESC will provide urgent advice to the Government on the extent and causes of these delays and how they can best be addressed, including potential action through Victoria's regulatory framework."

The ESC has until 18 September 2018 to provide final advice to the Government.

The stakeholders in the subdivision approvals process are developers, their consulting engineers and construction contractors, the member associations who represent them, the power distribution businesses (DBs) and the growth area councils.

All the stakeholders are in universal agreement that safety and network reliability is paramount and not negotiable in the design and construction of power supply to new subdivisions.

Ideally, the stakeholders are all partners in the delivery of greenfield subdivisions in Melbourne's growth area councils to provide affordable housing to Melbourne's rapidly growing population.

A cross section of these stakeholders have been interviewed to identify the issues and opportunities to streamline the current systems, processes and response times from their respective points of view.

The stakeholders interviewed include (refer to *Appendix A2 – List of Departments & Organisations Interviewed*):

- Developers (four)
- Civil and electrical design consultants (four)
- Civil and electrical contractors (four)
- Power distribution businesses (three)
- Growth area councils (six)
- Member organisations (three)

The three main DBs covering the growth area councils offer developers three options to provide power to their new subdivisions. The options are similar but there is a slight difference in the identification of the options. Refer *Appendix B1 – Electricity Supply to New Subdivisions Options (Powercor)*.

From the perspective of power utilities, the approval processes leading to electrical Statement of Compliance which is a requirement of the planning permit to trigger title release, can be split into the following stages which are shown in *Appendix B2 – Existing Generic Option 2 Process Flow Chart*:

1. Service master plan / network scope plan
2. Reticulation design and approval (including public lighting)
3. Construction management and delivery
4. Construction audit processes
5. Power 'tie-in'

*Appendix B3 – Proposed Generic Option 2 Process Flow Chart* incorporates the streamlining opportunities discussed and proposed in this report.

There is a clear difference between the issues and opportunities cited by the DBs, growth area councils and the rest of the stakeholders. However, the division is best viewed from two camps – the DBs and growth area councils versus developers, their consultants and construction contractors.

Distillation of the issues across all stakeholders is as follows:

- Inconsistent contestability models across DBs
- No single consistent and transparent systems, processes and timelines across all DBs
- Design quality
- Construction quality and on-site management
- DB resource adequacy (design checking and auditing)
- Inconsistent interpretation of standards (design checking and site auditors)
- Alternatives for public lighting approval by councils and 'as constructed' electrical plan approvals by DBs
- Audit 'Walk off' policy as applied by one DB
- Tie-in lead times

The report examines these issues in the context of the five phases nominated above and makes recommendations on opportunities to address them. The opportunities will all require further investigation and consultation with all stakeholders to determine the cost and benefit of each, prioritisation if assessed to be justified and the most appropriate vehicle to use (ie negotiated service level agreement / memorandum of understanding vs legislation/regulation).

There is another issue that warrants consideration. It is the relationship between the power distribution businesses and the development sector (ie developers, consultants and contractors).

There are twenty-five opportunity recommendations in the report. By the nature of this project, some are repetitive as they are common across the phases.

Rather than reproduce all the opportunity recommendations from the report, they can be summarised and grouped under who is responsible for them. Note that the opportunity recommendations are not prioritised.

#### **A. DISTRIBUTION BUSINESSES AND COUNCILS**

- (i) Contestability across all DB service areas, including out-sourcing of audit functions (refer *Appendix B3 – Proposed Generic Option 2 Process Flow Chart*)
- (ii) Development and implementation of a single consistent framework of systems, processes and timelines for use by all DBs
- (iii) DBs to review their resources (design approval and auditing) against the current and foreseeable workload and increase them or appoint panels as required
- (iv) DBs to review the audit standards and tolerances to minimise interpretation issues and train staff accordingly
- (v) Withdraw the site audit 'Walk off' policy and complete an initial full site audit and defects report

**B. DEVELOPMENT SECTOR**

- (vi) Developer's electrical design consultants to actively manage their electrical design quality prior to submission for approval
- (vii) Civil contractors to actively manage construction quality and review/upgrade the skills of their construction crew staff and management

**C. ALL STAKEHOLDERS**

- (viii) Review the existing VEDN training and registration framework to incorporate practical field tools that contractors can use to deliver the specified standards
- (ix) Review approval processes for public lighting designs and 'as constructed' electrical plans
- (x) The active engagement of all development stakeholders to improve relationships, and develop a change communication process to manage matters that impact stakeholders
- (xi) Allocate greater priority to comprehensive service master planning at the front end of developments, including consideration of transitioning to 3D design and sub-station siting

Finally, the report concludes with a list of other utility aspects of the subdivision matrix, outside the scope of this report, that the stakeholders deem worthy of further consideration for streamlining.

# 1 Service master plan / network scope plan

Post-PSP, when a developer decides to proceed with their development, a functional layout plan (FLP) in accord with the PSP, is prepared to accompany the developer's application. All the DBs require the approved FLP for service master planning/network scope planning to occur. Refer to *Appendix A1 – Land Subdivision Process Flow Chart*.

The service master plan / network scope plan is the first step in the electrical design and construction for power supply to a new subdivision.

There is general acknowledgement by developers and their consultants of the importance and benefits of comprehensive service planning at the front end of developments. It can and should have a greater focus than it currently receives by developers and DBs.

Comprehensive service master planning provides an opportunity to integrate the services for all utilities and to identify potential service clashes that can be mitigated during design. Logically, gravity services (drainage and sewerage) have a priority in design outcomes.

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*An opportunity that warrants further investigation is locating all sub-station sites on the same side as the electrical open trench. This would avoid the need for large banks of road crossing conduits having to cross stormwater drainage, water and gas services which generally results in service clashes and the need for over depth conduits.*

*This would need to be assessed against the existing preference for sub-stations on open space reserves. Note that it would require provision of adequate space in the nature strip for electrical conduit/cable bends.*

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The process for the provision of power to subdivisions in Melbourne's growth area councils primarily occurs via a process identified as Option 2 or 2A (dependent on the DB) – ie the developer runs their own tender process to select a recognised contractor for the contestable services. Refer to *Appendix B1 – Electricity Supply to New Subdivisions Options (Powercor)* (Note that AusNet and Jemena are similar).

The DBs independently determine which of their services are contestable (refer to *Appendix C – Comparison of DB Contestable Vs Non-Contestable Services*).

## DB PROCESS MODELS

AusNet and Jemena both allow contestability for service master planning in their respective areas. Developers can engage an endorsed designer to prepare the electrical master plan for their estate, but it must be approved by the respective DB.

Powercor do not allow contestability for the preparation of the network scope plan. It must be undertaken in-house by Powercor designers. Once the network scope plan is issued by Powercor, the developer's appointed electrical designer can proceed with the reticulation design.

The difference in these two process models is time and cost. Refer to *Appendix D – DB Comparison for Service Master Planning & Reticulation Design Plan Preparation & Approvals Estimated Times & Costs*.

If the service master planning / network scope planning is made contestable across all DBs, Powercor will have to provide endorsed designers with access to their network policy framework and data for the area in question.

## 3D DESIGN MODEL

Services construction (excluding sewers and drains) is frequently in a shared trench, with different offsets, clearances and depths for each service. Service clashes can occur when the trenches cross each other – eg road crossing conduits. The gravity services of sewer and drains take priority when this occurs. Service clashes can and should be identified and avoided during the design process.

The civil design is currently performed using two dimensional (2D) or three dimensional (3D) design systems. The transition to 3D design systems can identify potential service clashes and appropriately resolve them during design. This would allow design dispensation approvals for unavoidable clashes to be submitted and minimise the likelihood of construction dispensation application instances.

## RECOMMENDATIONS

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- 1.1** That developers and DBs give a greater priority to service master planning / network scope planning at the front end of developments.

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- 1.2** That all power distribution businesses allow service master planning / network scope planning to be contestable and apply a common approval fee and timeline.

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- 1.3** That a stakeholder working group investigate the option of locating electrical sub-stations on the same side as the electrical trenching in comparison to the existing preference for sub-station siting on open space reserves.

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- 1.4** That a stakeholder working group be formed to investigate the cost and benefits of the development sector transitioning to a 3D design system for service master planning / network scope planning and electrical reticulation design.

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## 2 Reticulation design and approval (including public lighting)

There are two aspects to the design preparation and approval. The first is the electrical reticulation design. The second is the street lighting design. Both require the approval of the relevant DB. However, DBs will not issue approval for the electrical reticulation design until the council has formally approved the street lighting design. This linear sequence of design approval can create time delays.

### ELECTRICAL RETICULATION DESIGN

While all DBs offer an internal electrical reticulation design and approval service on a fee for service basis, they accept electrical reticulation design preparation as a contestable activity.

In metropolitan growth area councils, developers opt for contestability. This decision is price and lead time based, plus developers do not consider that DBs are adequately resourced for greenfield electrical reticulation design projects.

Developers appoint their civil engineering consultants who may sub-contract the electrical design or the developer will directly appoint the electrical design consultant. Either way, the civil and electrical designers are required to actively interact throughout the design phase.

Refer to *Appendix D – DB Comparison for Service Master Plan & Reticulation Design Plan Preparation & Approvals Estimated Times & Costs*.

All DBs should be required under a stakeholder negotiated (and binding) level of service agreement or via legislation / regulation to issue comments and design approvals within a specified time.

A supplementary issue that frequently arises when amendments to a consultant design are requested by a DB, is the design checker will raise a second list of amendments when first round amendments are submitted for approval. This 'second bite at the cherry' can add an additional 4–6 weeks to the design approval process. DBs should issue a single schedule of design amendments. When initial amendment verification occurs, a supplementary list of new amendments should not be permitted, except in circumstances where an amendment has caused major design changes and the resultant implications need to be considered.

### DESIGN QUALITY CONTROL

The DBs are concerned that the quality of designs they receive to check and approve, directly influences the schedule of design amendments they require from designers before they approve the design plans. They suggest that the electrical design consultants must accept more responsibility for the training of their designers and the application of the consultant's own quality management systems to designs before designs are submitted to the DBs for approval. Only then will the percentage of designs approved without needing amendment increase.

Conversely, the electrical design consultants cite inconsistent interpretation of design standards by DB design checking staff and a lack of training of those staff to reduce inconsistent interpretations. Developers also query whether there are adequate resources across the DBs to manage the current and foreseeable workload.

Developers have suggested the introduction of contestability for plan checking. This important function could be performed by suitably qualified, accredited and registered third parties, thereby taking DB resources out of the equation.

### PUBLIC LIGHTING DESIGN APPROVAL

All public lighting designs are required to comply with Australian Standard P4. The design is concurrently prepared by the same electrical designers who design the reticulation design. Both designs are integrated.

The DBs all require formal approval for public lighting designs from councils before the DBs will approve the electrical reticulation design.

Councils advise it takes approximately 2 hours to check public lighting designs and designers are immediately contacted if amendments are required. However, the designs are checked in the order they are received and the lead time is typically 1–4 weeks. Generally, councils will not issue public lighting design approval until civil design plans are approved.

Based on council feedback, the number of public lighting design amendments is dependent on whether a council has additional design requirements beyond P4. These requirements could be issued to electrical designers in the form of a supplementary requirement guide. Councils without additional design requirements advise a high percentage of designs are approved without amendment.

All stakeholders agree that public lighting design is a low risk in the approvals process. Councils are keen to maintain responsibility for approving public lighting designs to avoid future rectification costs if traffic management devices are not correctly lit or lamp orientation causes light spillage into residential properties. However, the value their approval adds to the outcome is marginal.

Public lighting designs could equally be certified by an endorsed electrical designer. Approval by a council is arguably redundant. The certified design could be submitted directly to a DB with the electrical design drawings. This would potentially save two weeks in the design approval process.

## RECOMMENDATIONS

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- 2.1** That a design approval timeframe be developed by all stakeholders and incorporated in a negotiated (and binding) service level agreement or incorporated in legislation / regulation.
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- 2.2** That DBs are not permitted to issue supplementary design amendments when verifying completion of originally requested amendments.
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- 2.3** That the introduction of contestability for electrical design plan checking and approval by suitably qualified, accredited and registered third parties be pursued.
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- 2.4** That public lighting designs no longer require council approval, provided the design is certified by a suitably qualified, accredited and registered electrical designer (note that some councils may need to issue a supplementary requirement guide).
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- 2.5** That DBs accept public lighting designs certified by a suitably qualified, accredited and registered electrical designer.
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### 3 Construction management and delivery

Where a developer opts for contestability in appointing their own electrical design consultant (ie Option 2 or 2A), the DBs require that every such project must have a developer's Project Manager (PM2) appointed by the developer at the developer's cost.

The PM2 is typically the electrical designer, electrical contractor, principle contractor or civil consultant. The role of the PM2 is to document, implement and maintain a quality system that provides effective control of all project activities. Powercor provide a detailed description of the tasks the Project Manager is required to perform. AusNet and Jemena use a similar description. *Refer to Appendix E – Developer Project Manager (PM2) Responsibilities (Powercor).*

The PM2 is the sole communication conduit between the respective DB and the project.

#### CONSTRUCTION MANAGEMENT

Issues identified are that the PM2 may be responsible for more than one project and they have no direct control over the construction workforce. The continuous management of quality construction outcomes by construction crews therefore comes into question and can be exposed during construction auditing.

The DBs are members of the Victorian Electricity Supply Industry (VESI). The VESI has a committee titled the Victorian Electrical Distribution Network (VEDN) who are responsible for accrediting contractors who are involved in the civil aspects of underground electrical infrastructure. These works include excavations, trenching, boring, conduit installation, cable hauling and earthing system installation.

It is acknowledged that the civil construction sector has been steadily improving the quality control of their crews, but more is required to improve construction quality outcomes. This will reduce audit defects.

The electrical installation has three steps:

1. The trenching (on and off road) and conduit installation is performed under the civil works contract.
2. Cable bedding, installation and initial backfill is performed by the electrical contractor.
3. Tape and cover slab placement and backfill to the finished surface level is performed by the civil contractor.

Each step must be audited by a current VEDN endorsed auditor (Worksite Civil or Worksite Electrical) and records (including 'as constructed' details) made.

The cable installation can be directly contracted out by the developer, or the civil contractor can sub-contract the task under the provisions of their contract.

Where the developer directly contracts out the cable installation, the civil contractor is expected to co-ordinate the activities of the cable subcontractor (ie timing and construction quality management) without contract jurisdiction over the subcontractor. Some civil contractors are requesting their developer clients to place the cable installation within the civil contract to provide the civil contractor with full contract responsibility for this task.

Whilst there is no right or wrong path to follow, allocating contract responsibility to the civil contractor for the cable installation is considered likely to consistently improve management of the task.

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*The presence of a VEDN accredited member in each construction crew with responsibility and authority for construction quality is considered worthy of trial and evaluation. This could be measured by audit defect results. It would require contractor investment to upskill their staff via training and development to achieve VEDN accreditation. Full accreditation requires three years and is reviewed annually.*

*A second option is to increase the role and authority of the PM2. This would require the presence of the PM2 on each site during all electrical construction tasks with direct authority over construction crews and quality control. There are potential cost and resource issues that require investigation in this option.*

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Preference should be for construction contractors to be responsible for the quality management of their construction activities at all times.

## **'AS CONSTRUCTED' PLANS**

Developers and their contractors have identified significant lead times with obtaining approval for 'as constructed' electrical plans which are a prerequisite to booking initial audits. The lead time ranges from 1–2 weeks (AusNet and Jemena) and up to 4 weeks (Powercor). Any amendments to the 'as constructed' plans can add an additional 2–3 weeks per re-submission.

The DBs currently require this step to ensure the quality and standards of amendments made to previously approved design plans are acceptable. Some DBs estimate that 80–90% of 'as constructed' plans are approved without amendment.

It is noted that councils accept 'as constructed' civil plans without any requirement for checking and approval. Based on this model, developers and their contractors query the need and benefit of this DB requirement.

However, if a DB approval is required, there may be a more efficient alternative. Developers could have their 'as constructed' plans checked and certified by a suitably qualified and registered third party and issued for audit purposes. The third party would be a qualified electrical designer (as per DB standard requirements) and could be on a panel appointed by the DBs (ie registered). The task is anticipated to take one week and therefore could achieve efficiencies of 1 to 5 weeks.

## **RECOMMENDATIONS:**

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- 3.1** That the options of a VEDN accredited member in each construction crew and/or an increase in the role and authority of the PM2 be evaluated by a stakeholder reference group.

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  - 3.2** That developers be encouraged to include electrical cable installation in the main civil works contract.

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  - 3.3** That a stakeholder working group investigate the need for DBs to approve 'as constructed' electrical plans, and if justified, the alternative of a suitably qualified and registered third party undertaking that task.
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## 4 Construction audit processes

Developers and their consultants and contractors are unanimous that auditing is an essential process in subdivision statement of compliance (SoC).

However, the inconsistency in systems, processes and lead times for auditing and re-auditing between the DBs can create delays for developers. Delays at this final stage in the subdivision process can significantly impact SoC with financial implications for developers and purchasers alike. This can include developer contribution indexing and builder delay penalties.

The development sector has queried the adequacy of each DB resourcing at this time sensitive stage of the overall process. This is best demonstrated by considering the current frameworks.

Each of the DBs have their own systems and processes for auditing subdivision construction when it is ready for Statement of Compliance (SoC). Refer to *Appendix F – DB Audit Steps & Typical Timeline Comparison*.

### AUSNET

The AusNet audit process requires approval of the 'as constructed' plans by AusNet. The steps (refer to *Appendix G – Construction Audit Responsibilities (AusNet)*) and typical times are:

- Handover inspection report by AusNet accredited auditor (Step 4 in *Appendix G*)
- Pre-commission audit booked with AusNet (typically 5 day turn around) (Step 5 in *Appendix G*)
- If audit passes, report is prepared and approval for SoC is fed into SPEAR on the same day
- 'Tie-in' is booked (typically takes 4–6 weeks) (Step 6 in *Appendix G*)
- Practical completion of tie-in (usually 1 day) (Step 7 in *Appendix G*) but developers report 1–6 months lead time for the works to start
- Final audit (typically takes 10 working days) (Step 8 in *Appendix G*)

The AusNet audit function (pre-commission and final auditing) is not contestable. But they have outsourced it. It is under a single contract. AusNet advised they are reviewing this arrangement as the current contract involves a payment for each audit and re-audit. There is no incentive for the audit contractor to manage down the number of re-audits.

Note that the same auditor typically performs any re-audits. This arrangement is strongly favoured by developers and their contractors.

The current contractor also performs other works for the development sector in the same space. Adequacy of their resources and any potential for of conflicts of interest needs appropriate contract provisions to avoid the risk.

The audit defect framework is:

- (i) **Observation defects** – minor defects that do not affect network functionality or public safety
- (ii) **Non-compliance defects** – major defects affecting public safety and network functionality

The AusNet initial audit covers the full site and all observation defects and non-compliance defects are contained in the audit report.

Observation defects are bonded and must be rectified before the final audit, but SoC approval is issued. Non-compliance defects result in audit failure and necessitate a satisfactory re-audit before SoC is issued.

### POWERCOR

The Powercor audit function is non-contestable. All audits and re-audits in their DB area are conducted by Powercor's own internal auditors. Powercor cite a history of development sector poor construction management and the sector relying on DB audit inspections for construction quality control for the decision to internalise auditing. They indicated their business model is unlikely to change until the development construction sector can demonstrate it has its quality system outcomes in order.

Powercor audits cannot occur until approval of the 'as constructed' plans by Powercor. The audit steps and typical times are:

- Handover inspection report by Powercor accredited auditor
- Compliance audit booked with Powercor (typically 1–2 week turn around)
- If audit passes, audit report is prepared and a letter of consent to council for electrical SoC is fed into SPEAR (typically takes 5 days)
- 'Tie-in' is booked (minimum notice period is 15 working days after audit compliance)
- Construction of tie-in (usually 1 day) but developer representatives report lead times of 2–6 months for the works to start

Re-audits lead times are normally 2–3 weeks after fee is paid and booking is accepted. Note that the same auditor can perform both audits but this may involve a delay.

A summary of the audit defect framework is:

- (i) **Observation defects** (0pts) – no impact on key business strategies, negligible safety or reliability risks perceived
- (ii) **Minor non-compliance** (1pt) – minor impact on key business strategies, with risk possible in the long term
- (iii) **Multiple (of minor) or medium non-compliance** (5pts) – multiple instances of a minor non-compliance – no further deductions are recorded after 5 occurrences of the same non-compliance
- (iv) **Major non-compliance** (10pts) – major impact on key business strategies, with risk present in the short term

Developers and contractors all advise that 'cosmetic' defects that do not pose a risk to public safety or network functionality and reliability are recorded by Powercor as a minor non-compliance and awarded 1pt. They are not aggregated into the multiple (of minor) non-compliance category and awarded 5pts. Instead they are scored individually and can result in audit 'walk off' once there are ten such defects encountered. They are concerned that auditors interpret and apply Powercor's risk assessment criteria differently.

## JEMENA

Jemena has five audit stages:

- (i) **Stage 1: Pre-cable Audit** – carried out at the open trench stage and prior to the cable installation
- (ii) **Stage 2: Cable Installation Audit** – installation of cables, joints, sand and slab, clearances to other assets, etc carried out at open trench stage and prior to any backfilling
- (iii) **Stage 3: Handover Audit** – overall check of project to ensure compliance to technical standards (ready for 'tie-in')
- (iv) **Stage 4: Pre-commissioning** – Sample inspections to confirm safety and reliability of project prior to placing the assets into service
- (v) **Stage 5: Final** – confirms all works completed including site status

Stages 1–3 audits are managed by the developer. Stage 4 and 5 audits are managed by Jemena. They are not contestable, but Jemena has outsourced them.

The audit defect categories and definitions used by Jemena are:

- **Observation defect** – no impact on safety or reliability (audit pass)
- **Minor non-conformance defect** – minor impact on safety and/or reliability of the project or with the possibility of long term impact (audit fail)
- **Major non-conformance defect** – major impact on safety and/or reliability of the project or with possibility of long term impact (audit fail)

- **Critical non-conformance defect** – cases where a non-conformance is considered to require immediate attention.

Jemena will issue an electrical SoC allowing title release after a Stage 4 satisfactory audit and a tie-in date is booked. Audits will be unsatisfactory and fail based on minor, major and critical non-conformance defects.

## DEVELOPMENT SECTOR

The development sector unanimously want a single auditing framework and associated timeline, including priority for re-audit bookings that is adequate to respond efficiently to the current and projected workload confronting the DBs. This can extend to reviewing the DB fee structure for the audit function to ensure adequate resources are available.

Despite the reservations of Powercor, the development sector seeks contestability across all DBs for the auditing function, with service levels in place to guarantee response times. Contestability is also considered an effective resolution to the current and future resource concerns.

## BONDING

Powercor will not bond any defects, even observation defects that attract Opts under their framework. In essence, they require a project to be defect free before it receives a compliance audit pass enabling title release. Powercor advised that their decision to refuse to bond even observation defects was the result of developers and their contractors not rectifying these defects in a reasonable time and in some instances, not at all.

Ausnet will bond observation defects thereby allowing a pre-commissioning audit pass for SoC purposes and title release. However, they did express concern at the difficulty experienced with developers and their contractors rectifying observation defects in a timely manner. At the moment, AusNet’s only lever is the final audit which triggers payment of rebates that developers are entitled to receive. A final audit pass is conditional on all observation defects being rectified.

Jemena do not bond observation/minor defects, but expect and normally require them to be rectified before tie-in construction occurs. If, however, this has not occurred, they still allow the tie-in construction to proceed and issue the electrical statement of compliance for title release. They require all defects to be rectified prior to final audit and release of any rebates. Similar to AusNet, Jemena reported difficulty with some developers and their contractors to complete the rectification works in a timely manner.

## RECOMMENDATIONS

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- 4.1** That a stakeholder working group identify a single auditing system, framework and associated timelines for power utility SoC auditing, including priority for re-audit bookings and a review of the DB audit fee structure to ensure adequate resources are available.

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  - 4.2** That the power utility audit function be contestable across all DBs.

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  - 4.3** That power utility initial site audits be for the full site, irrespective of the quantity of defects observed.

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  - 4.4** That observation/minor defects that do represent a risk to the functionality, reliability or safety of the network are not the basis for pre-commissioning or compliance audit failure.

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  - 4.5** That a stakeholder working group identify a mechanism to ensure developers and their contractors respond in a timely manner to observation/minor defects rectification, including an appropriate bonding arrangement.

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## 5 Power tie-in

Power tie-in is the final step and occurs post SoC. However, developers are concerned that it should occur in a timely manner immediately following title release so purchasers can get temporary site supply for their builders.

Title release occurs within a few days of SoC being issued by councils. Many land purchasers have their builders ready to commence immediately after they receive their property title.

One DB advised that their current tie-in timeline is 6 weeks after SoC and title release. This necessitates builders to hire generators at considerable expense which is ultimately passed on to home owners.

Powercor and AusNet treat tie-in construction as a non-contestable activity and it must be done through them. Powercor have their own internal construction workforce. AusNet has outsourced their construction (Downer).

Investigation into costs, benefits and risks of making this task contestable and the resultant completion times is warranted. As AusNet's current external provider can be licensed to undertake this work, consideration should be given to other suitably qualified and registered contractors performing this work. Once performed, the work would be subject to DB audit and approval.

The same principle applies to any power supply augmentation works necessitated by a subdivision. Developers advise the current lead times for the DBs to undertake augmentation works 12–52 weeks.

### RECOMMENDATIONS

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- 5.1** That a stakeholder working group investigate the costs, benefits and risks associated with power tie-in, power supply augmentation construction and the potential time saving if this activity was contestable across all DBs, noting that all such works are subject to audit and approval by the relevant DB.
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## 6 Stakeholder relationship management

The development sector desire a genuine partnership with utilities and power utilities specifically to deliver affordable residential subdivisions in a timely, seamless manner.

There are contrasting views about the state of the current relationship between the stakeholders in the development arena.

The DBs individually are viewed very differently by the development sector. Some are considered to be reasonably flexible and facilitative. One is considered extremely inflexible and challenging to deal with across most issues.

During construction, the PM2 is intended to be the sole communication conduit between the DB and the project. Some DBs apply this more rigidly than others.

The DBs consider that they adequately interact with the development sector stakeholders. They advise that developers and their consultants and contractors infrequently bring issues to them.

The DBs advise that they are accessible for direct meetings with developers and contractors on project issues outside the communication through the PM2.

As an example, Powercor advises that:

- they monitor audit non-compliance audit trends and try to work with individual contractors to address the contractor's issues;
- they have quarterly meetings scheduled with ALDE and UDIA to review these audit trends and to discuss mitigation strategies; and
- regular meetings are held with some developers, PM2s, civil and electrical contractors.

The development sector views the DBs as operating virtual monopolies with sole discretion on contestability in key service activities. DB decisions lack transparency and are frequently made unilaterally without appropriate consultation with the stakeholders who are impacted. The sector would like their issues heard, addressed and mandatory contestability across all DB activities (refer to previous sections of the report).

The sector views the range of meetings that are currently occurring to be often one-sided, and mutually beneficial outcomes are difficult to negotiate and finalise, as DB attendees must refer any decisions back to their management. Desirably, all stakeholder attendees at these meetings should have decision making authority. Note that industry group meetings should operate with terms of reference and include a sunset clause. They should not continue if they are not achieving outcomes.

The development sector report difficulties in obtaining direct answers to their issues as they have to deal with independent DBs. The answer to the same issue may vary considerably across the DBs.

They cited that each DB has different systems, processes and timelines for electrical design plan approval and site audits. The development sector consider that the best starting point is a single, consistent system, process and response time framework for use by all DBs.

Interpretation issues frequently arise in the application of the existing standards and tolerances within and across DBs. This can and should be minimised through regular industry forums and workshops attended by the plan checkers, auditors and development stakeholders to establish clear, consistent and unambiguous interpretations for all participants. This could be reinforced by ongoing and refresher training for all concerned.

The development sector advises that the existing VEDN training and registration is seen to be very theoretical. The framework needs revision from a practical standpoint so participants understand construction and equipment processes and limitations. Participants should be provided with 'field tools' that contractors can use to deliver the standards that are required. This could include guidance around the application of tolerances during site audits.

Developers have queried the lack of transparency in the content and rebate calculation in the commercial offers received from the DBs. The timelines for receipt of these offers varies considerably between the DBs. The offers should be consistent with the adopted PSP outcomes, but this is not always the case.

The majority of development sector interviewees favour a stakeholder negotiated binding service level agreement with DBs that defines amongst other things, the DB response times for plan approvals, dispensation approvals (design and construction), audits and service contestability. If this can't be achieved expeditiously, then appropriate legislation and regulation must be introduced. Either could be considered under both arrangements for failure to achieve the timelines.

## RECOMMENDATIONS

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- 6.1** That all DBs commit to actively engaging with the development sector through a formal consultation mechanism on any changes to systems, processes, standards and their interpretation that are likely to impact the sector (i.e., no unilateral 'goal post shifting').
- 
- 6.2** That a stakeholder working group review all DB existing systems, processes and response times and develop a single framework for use by all DBs.
- 
- 6.3** That a stakeholder working group review existing standards and tolerances to standardise them and determine the most appropriate way to achieve a consistent interpretation and application of standards and tolerances during electrical design plan approval and site audit processes.
- 
- 6.4** That the existing VEDN training and registration framework be reviewed by a stakeholder working group to incorporate practical field tools that contractors can use to deliver the specified standards.
- 
- 6.5** That all DB services be made contestable or outsourced to a panel where not contestable (eg audit functions).
- 
- 6.6** That DBs consult developers on the content and formulation of commercial offers before they are finalised.
- 
- 6.7** That a stakeholder working group negotiate a binding service level agreement inclusive of DB response times for plan approvals, dispensation approvals (design and construction), audits and service contestability within 6 months or appropriate legislation and regulation be introduced.
-

## 7 Other potential streamlining opportunity referrals

During the interview process, several interviewees nominated issues outside the parameters of this scoping study report. The issues represent additional streamlining opportunities that are worthy of further investigation.

The issues are contained in *Appendix H – Matters for future investigation*. The issue listing is not in any specific order of priority. The issues are listed as items with a summary description and the forecast impact they offer being time and/or money.

### Conclusion

The interview process that is the basis of this report identified multiple opportunities to streamline power utilities role in the subdivision approval and statement of compliance processes. It should be noted that two of the distribution businesses (DBs) use very similar processes and timelines.

Some opportunities can be pursued immediately by developers (eg design and construction quality control with their designers and contractors).

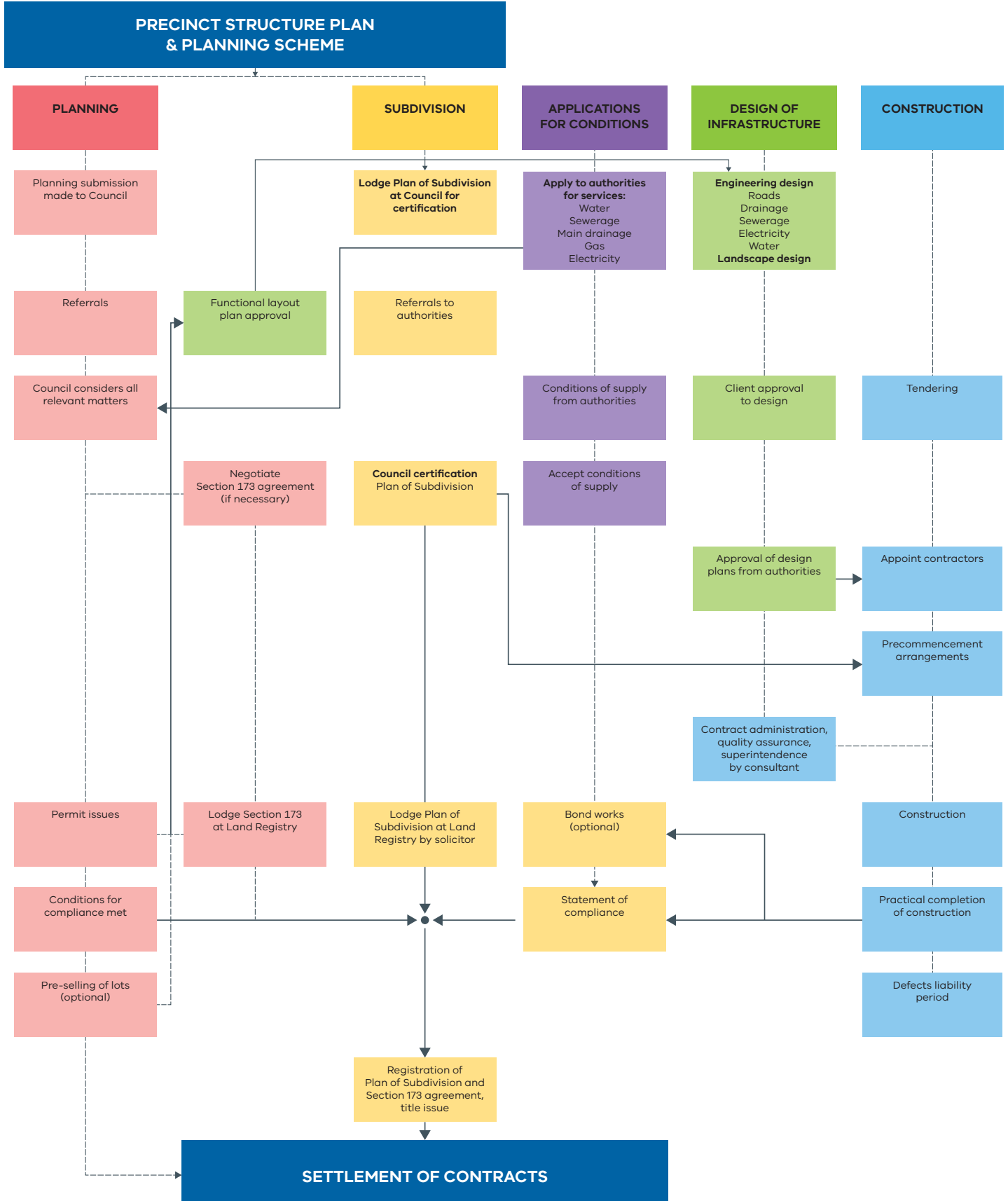
Other opportunities require investigation by a stakeholder working group.

Key opportunities, including response times and a common DB process, require the negotiation of an agreed (and binding) service level agreement (SLA) or memorandum of understanding (MoU) between DBs and the development sector.

Finally, the active participation of all stakeholders in a partnership to sustainably deliver affordable residential subdivisions in a timely, seamless manner must be the common objective. The stakeholder relationship opportunities hold the key.

# Appendix A1

## LAND SUBDIVISION PROCESS FLOW CHART



## Appendix A2

### LIST OF DEPARTMENTS & ORGANISATIONS INTERVIEWED

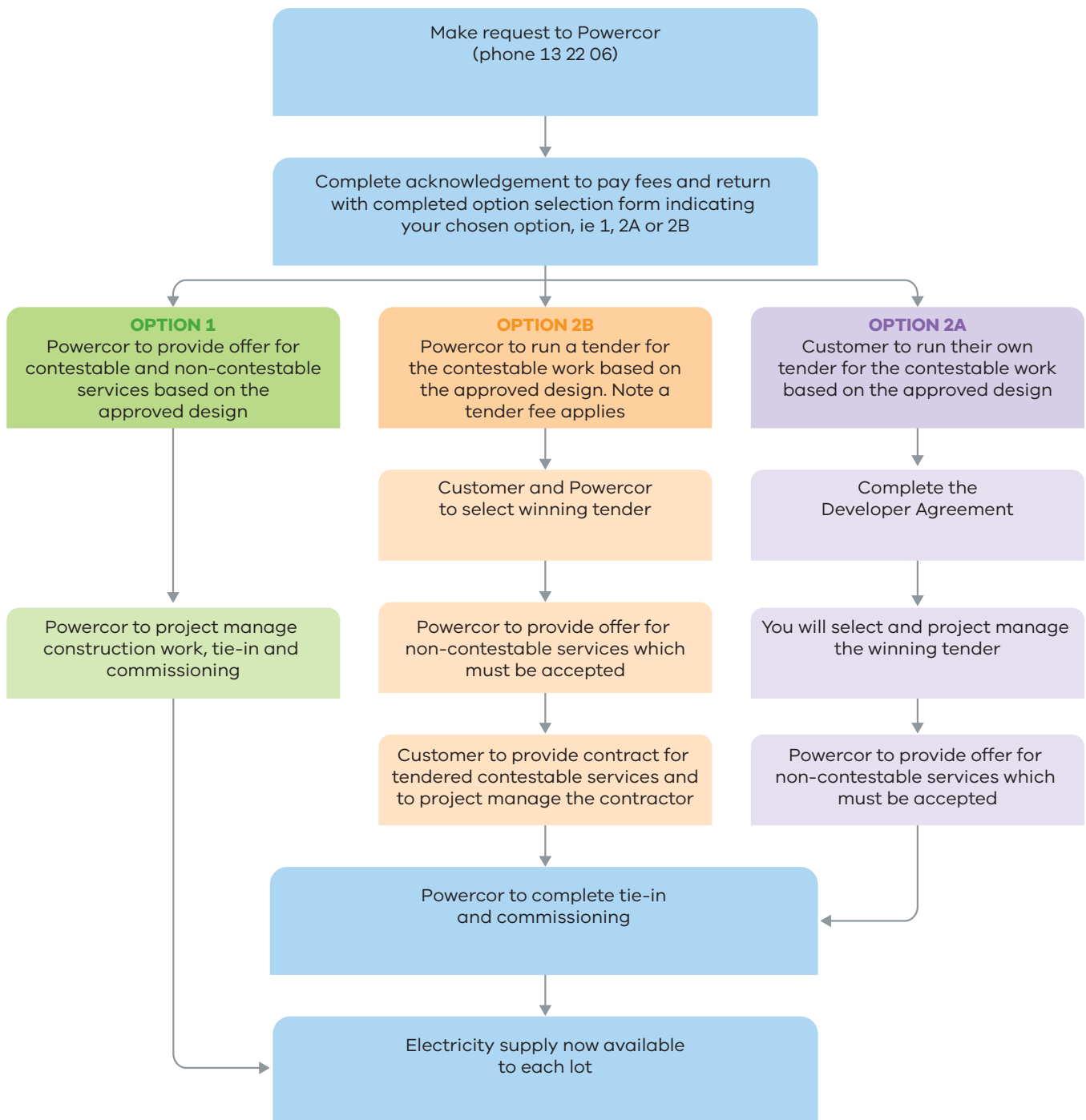
- DELWP
- Titles Office
- Power distribution businesses (3No)
- Urban Development Institute Australia – Victoria (UDIA)
- Civil Contractors Federation – Victoria (CCFV)
- Association Land Development Engineers (ALDE)
- Growth Area Councils (6No)
- Developers (4No)
- Civil and electrical design consultants (4No)
- Civil electrical construction contractors (4No)

# Appendix B1

## ELECTRICITY SUPPLY TO NEW SUBDIVISIONS OPTIONS (POWERCOR)

NOTE: SIMILAR FOR AUSNET & JEMENA

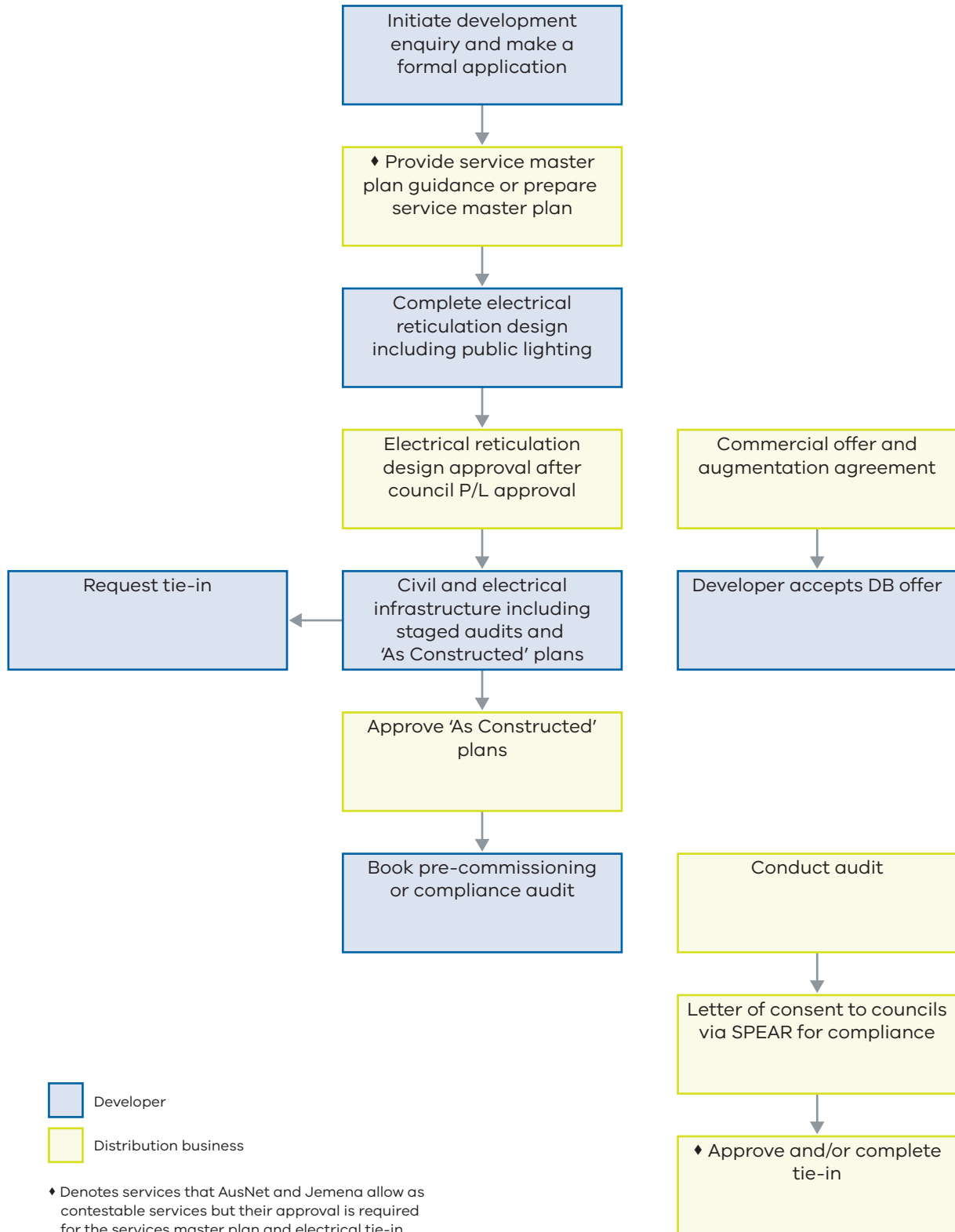
### AVAILABLE CUSTOMER OPTIONS FOR WHO COMPLETES CONTESTABLE WORK



Source: Powercor Guideline for Making an Electricity Supply Available to your Subdivision, 2011.

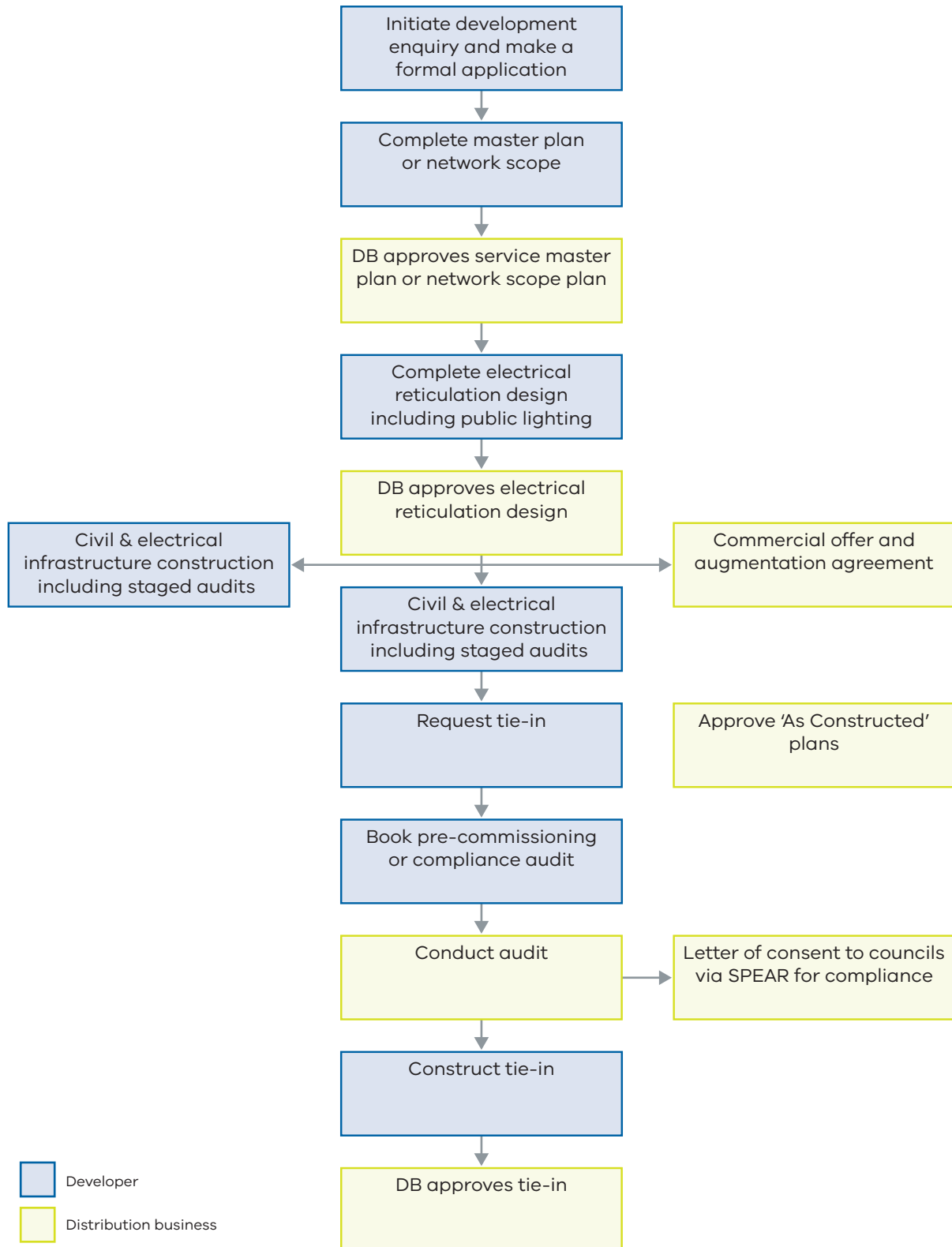
## Appendix B2

### EXISTING GENERIC OPTION 2 PROCESS FLOW CHART



## Appendix B3

### PROPOSED GENERIC OPTION 2 PROCESS FLOW CHART





## Appendix C

### COMPARISON OF DB CONTESTABLE VS NON-CONTESTABLE SERVICES

SERVICE	POWERCOR		AUSNET		JEMENA	
	CONTESTABLE	NON-CONTESTABLE	CONTESTABLE	NON-CONTESTABLE	CONTESTABLE	NON-CONTESTABLE
System requirements		X		X		X
Service masterplan		X	X		X	
Service masterplan approval		X		X		X
Project management (PM2)	X		X		X	
Reticulation design (incl P/L)	X		X		X	
Public lighting approval		Council		Council		Council
Reticulation design approval		X		X		X
Reticulation construction	X		X		X	
'As constructed' plan approval		X		X		X
Reticulation pre-commission audit	N/A	N/A		X (outsourced)		X (outsourced)
Reticulation construction audit		X		X (outsourced)		X (outsourced)
Augmentation construction		X		X (outsourced)	X (minor)	X (major)
Augmentation construction audit		X		X (outsourced)		X (outsourced)
Tie-in		X	X		X	
Tie-in approval		X		X (outsourced)		X (outsourced)

## Appendix D

### DB COMPARISON FOR SERVICE MASTER PLAN & RETICULATION DESIGN PLAN PREPARATION & APPROVAL ESTIMATED TIMES & COSTS (FOR A TYPICAL 60 LOT SUBDIVISION)

SERVICE MASTERPLAN								
DB	PREPARATION			APPROVAL			TOTAL	
	CONTESTABLE	TIME (WEEKS)	COST	CONTESTABLE	TIME (WEEKS)	COST	TIME (WEEKS)	COST
POWERCOR	N	8-20 (1-3)	\$20-30K	N/A	N/A	N/A	8-20 (1-3)	\$20-30K
AUSNET	Y	1-2	\$10K	N	4 (3-4)	\$2-3K	6 (4-6)	\$12-13K
JEMENA	Y	1-2	\$10K	N	4 (5-8)	\$2-3K	6 (6-8)	\$12-13K

RETICULATION DESIGN								
DB	PREPARATION			APPROVAL			TOTAL	
	CONTESTABLE	TIME (WEEKS)	COST	CONTESTABLE	TIME (WEEKS)	COST	TIME (WEEKS)	COST
POWERCOR	Y	1-2	\$10K	N	10-12 (5-6)	\$3.5K	11-14 (6-8)	\$13.5K
AUSNET	Y	1-2	\$10K	N	2-4 (3-4)	\$2.2K	3-6 (4-6)	\$12.2K
JEMENA	Y	1-2	\$10K	N	8-10 (5-8)	\$2K	9-12 (6-10)	\$12K

**Note:**

1. Time & Cost are estimates based on development sector interview feedback and (xx) time estimates provided by DBs.
2. The Powercor Service Masterplan/Network Scope Plan is prepared & approved internally.
3. Reticulation design amendments: add 3-4 weeks (ie 1 week to amend plans & 2-3 weeks for DB approval). Powercor are the only DB to charge a fee (\$502 per resubmission for approval).

## Appendix E

### DEVELOPER PROJECT MANAGER (PM2) RESPONSIBILITIES (POWERCOR)

NOTE: SIMILAR FOR AUSNET & JEMENA

#### 7. Developer's Project Manager

Every project must have a Project Manager who is appointed by the customer at the initial request to Powercor for an offer of supply. The Project Manager can be the customer, electrical contractor, principle contractor, civil consultant or any other party that has been assessed and accredited by Powercor as competent to perform the Project Manager role.

The customer is to engage a Project Manager and notify Powercor of their selection either when submitting the Developer Agreement required for developer design and construct (Option 2), or on the contractor notification form for when you request Powercor to provide the design and construct (Option 1).

The Developer Agreement is available on the Powercor internet site at [www.powercor.com.au](http://www.powercor.com.au)

The Project Manager is responsible for the overall project management and is required to document, implement and maintain a Quality System that provides effective control of all project activities. For major developments an overall project management plan is required, incorporating the installation and coordination of all utility and infrastructure requirements. The electrical reticulation infrastructure requirements must be incorporated within this plan and be managed by the recognised Project Manager.

A Project Manager guideline is available which outlines the role of the Project Manager and the process required for connection of the subdivision to Powercor's distribution assets.



Source: *Powercor Guideline for Making an Electricity Supply Available to your Subdivision*, 2011.

## Appendix F

### DB AUDIT STEPS AND TYPICAL TIMELINE COMPARISON

STEPS	POWERCOR	AUSNET	JEMENA
	TYPICAL TIME (WEEKS)	TYPICAL TIME (WEEKS)	TYPICAL TIME (WEEKS)
Handover audit	Developer task	Developer task	Developer task
As Constructed' Plan Approval	2 (1)	1-2 (1)	1-2 (2)
Amendments to 'As constructed' Plan approval lead time	2-3 (1-2) *	2-3 (2-3)	2-3 (1)
Confirmation of return of 'As Constructed' plans	Up to 2	1-2 (1-2)	Up to 2
Audit booking confirmation from DB	1-2 (1)	1-2 (1-2)	1-2 weeks
Pre-commission Audit after booking	N/A	1 (1)	1 (1)
Re-audit lead time	2-4 (1-2)	1-2 (2-3)	1-2 (1)
Compliance Audit after booking	2 (2)	N/A	N/A
Electrical SoC letter to council after satisfactory Pre-comm or Compliance audit	1 (1)	1 (1)	1 (1)
Electrical 'Tie-in' after satisfactory Pre-comm or Compliance audit	8-26 (8-12)	4-26 (6)	4-26 (4)
Practical Completion (PC)	N/A	1 after tie-in	1-2 after tie-in
Final Audit	N/A	2 after tie-in (2)	2 after tie-in (1-2)

**Note:**

1. The time range is an aggregation of development sector interview feedback and (xx) DB feedback
2. The DBs use different terminology and different steps in the process
3. \* Powercor charges \$502 per resubmission to approve amendments

## Appendix G

### CONSTRUCTION AUDIT RESPONSIBILITIES (AUSNET)

NOTE: SIMILAR FOR POWERCOR & JEMENA

<b>STEP 1</b>	<b>CONSTRUCTION WORKS Inspection</b>	Pit, pipe, trench and ducts inspections (Civil)	Approved Worksite Auditor  An Approved Worksite Auditor (Civil) may undertake the Pit, Pipe and Conduit and Duct inspections	Managed by Customer or Agent
<b>STEP 2</b>	<b>CABLE HAULING</b>	Cable hauling inspections		
<b>STEP 3</b>	<b>CONSTRUCTION WORKS inspection</b>	Cable installation and electrical works inspections (Electrical)		
<b>STEP 4</b>	<b>HANDOVER Inspection</b>	Overall check of project to ensure compliance to standards (Electrical)		
<b>STEP 5</b>	<b>PRE-COMMISSIONING Inspection</b>	Inspection to confirm safety and reliability of project	Network Auditor	Managed by network auditor
<b>STEP 6</b>	<b>COMMISSIONING Activities</b>	Place asset into service	Network-approved personnel	Customer or AusNet Services Resources
<b>STEP 7</b>	<b>PRACTICAL COMPLETION Inspection</b>	Overall check that all works is completed (Electrical)	Approved worksite auditor (electrical)	Managed by customer or agent
<b>STEP 8</b>	<b>FINAL INSPECTION</b>	Inspection to confirm that all works completed	Network auditor	Managed by network owner

**BLUE** Customer resources

**ORANGE** AusNet Services resources

**GREEN** Customer or AusNet Services resources

## Appendix H

### MATTERS FOR FUTURE INVESTIGATION

ITEM	SUMMARY	IMPACT
<b>WATER UTILITY TECHNICAL STANDARDS</b>	VicRoads Approval Timelines for sewers & retarding basin retention times without consultation or BCA to all parties	\$s
<b>MELBOURNE WATER</b>	Resource & skills gap issues impacting subdivisions	Time & \$s
<b>SERVICE EASEMENT LOCATIONS</b>	Need to investigate options for service easements across the front of lots or increasing the road reserve width by reducing lot depth to create adequate space for all services in the road reserve & street trees	\$s
<b>SEWER CONSTRUCTION QUALITY MANAGEMENT</b>	Sewer utility requirement for extensive CCTV records of sewer construction quality must include defect validation before contractors are directed to excavate and rectify alleged construction defect	Time & \$s
<b>SE WATER APPROVAL TIMELINES</b>	Excessive approval timelines without apparent reasons are delaying subdivisions	Time & \$s
<b>SEWER UTILITY STATUTORY POWERS</b>	SE Water decline to use their statutory powers to compulsorily acquire easements across adjacent properties to construct sewer outfall connections	Time & \$s
<b>LV/HV GIFTED ASSETS</b>	LV reimbursements were recently stopped without prior consultation or justification to developers and there is no transparency in the HV reimbursement calculation	\$s
<b>DB DISTRIBUTION FEE</b>	DBs are allegedly charging a distribution fee per new lot in lieu of the LV reimbursement previously paid. No consultation, justification or transparency when this new fee was introduced. Need to be 'unpacked'	\$s
<b>DUOS TARIFF</b>	The distribution use of system tariff paid to DBs by State Government requires examination	\$s
<b>VICROADS APPROVAL TIMELINES</b>	VicRoads are too slow responding to referrals causing delays to plan certification & construction	Time & \$s

## Glossary

The glossary is provided to assist readers who may be unfamiliar with some of the terms used in the report. The development sector may use different words or terms for the same thing. The glossary provides the definition of the use of the words or terms in the report.

TERM	DEFINITION
<b>ALDE</b>	Association of Land Development Engineers
<b>'AS CONSTRUCTED' PLANS</b>	Recording of all electrical infrastructure in-situ following construction and DB approval of the 'as constructed' plans are a pre-requisite for use by auditors
<b>AUDIT</b>	An inspection of construction to establish compliance with the approved plans, specifications and standards
<b>AUDIT 'WALK AWAY' POLICY</b>	Often called the 'Walk off' policy. Used by Powercor if during an audit a project accumulates a total of ten (10) non-compliance points at any stage it will be deemed to have failed the audit. Once this limit has been reached the audit will cease and no further inspections are carried out
<b>BONDING</b>	Financial security accepted by some DBs for minor non-compliances or observation defects to facilitate electrical SoC which must be rectified before final audit/inspection
<b>CCF</b>	Civil Contractors Federation
<b>CONTESTABLE SERVICES</b>	Electrical works where the developer has the right under the jurisdiction of an electricity distribution business to select a contractor of the developer's choice to carry out works, subject to the contractor being approved by the electricity distribution business
<b>COSMETIC DEFECTS</b>	Superficial defects that do not affect network safety or reliability – generally referred to as Observation Defects
<b>CRITICAL NON-CONFORMANCE DEFECT</b>	Jemena network compliance audit term – cases where a non-conformance is considered to require immediate attention
<b>CIAW</b>	Customer Initiated Augmentation Works
<b>DB</b>	Electricity Distribution Business
<b>DISPENSATIONS (DESIGN/ CONSTRUCTION)</b>	If during the reticulation design, the designer identifies issues that warrant departure from a DBs design standards, a dispensation application can be submitted to the DB to modify the design standard in question. Similarly, during construction, the construction contractor encounters a site condition/issue that warrants a departure from the approved plans and/or standards, a dispensation application can be submitted to the DB to accept the construction modification
<b>ELECTRICAL RETICULATION DESIGN</b>	The design of URD (see below) for new greenfield subdivisions

TERM	DEFINITION
<b>FINAL AUDIT</b>	Jemena network compliance audit term – carried out to satisfy Jemena that all works are compliant with Electrical Safety Regulations and all Jemena standards before handover of ownership of the asset to Jemena and the payment of any reimbursements
<b>FINAL INSPECTION</b>	AusNet term – carried out by AusNet to satisfy AusNet that all works are compliant with Electrical Safety Regulations and all AusNet standards before handover of ownership of the asset and payment of any reimbursements
<b>FUNCTIONAL LAYOUT PLAN (FLP)</b>	Mandatory required as a planning permit condition showing all engineering elements which may influence either the dimensions of the plan of subdivision, the functionality of civil infrastructure, the achievement of an acceptable landscaped area or the preservation of prescribed features on the site
<b>GRAVITY SERVICES</b>	Sewerage and drainage services that must be designed and constructed with acceptable grades to function
<b>GREENFIELD</b>	Greenfield land is undeveloped land within the urban growth boundary that is developed of new residential developments
<b>HIGH VOLTAGE (HV)</b>	The primary distribution that may be 6.6, 11 or 22kV
<b>LOW VOLTAGE (LV)</b>	The distribution voltage at which most homes are supplied electricity
<b>MAJOR NON-CONFORMANCE DEFECT</b>	Jemena network compliance audit term – major impact on safety and/or reliability of the project or with the possibility of long term impact
<b>MAJOR NON-COMPLIANCE DEFECT</b>	Powercor compliance audit – major impact on key business strategies, with risk present in the short term (Deduction: 10pts)
<b>MEMORANDUM OF UNDERSTANDING (MOU)</b>	An agreement between two or more parties to express a convergence of will between the parties indicating a common line of action (eg service quality and timelines)
<b>MINOR NON-CONFORMANCE DEFECT</b>	Jemena network compliance audit term – minor impact on safety and/or service reliability of the project or with the possibility of long term impact
<b>MINOR NON-COMPLIANCE DEFECT</b>	Powercor compliance audit – minor impact on key business strategies, with risk possible in the long term (Deduction: 1pt). Where multiple instances of a minor non-compliance observed on a project may demonstrate a need for awareness/training to correct work practices or knowledge. A Multiple Non-compliance limits the total possible deduction for the same non-compliant item (Deduction: 5pts)



TERM	DEFINITION
<b>NON-CONTESTABLE SERVICES</b>	The activities associated with a developer initiates augmentation that can only be performed by the electricity distribution business
<b>OBSERVATION DEFECT</b>	Jemena network compliance audit term – no impact on safety or reliability
<b>OPTION 2 OR 2A</b>	Option 2 (AusNet or Jemena) or Option 2A (Powercor) are the options that developers can use where they run their own tender process to select a recognised/approved contractor for the provision of contestable services (ie design and construction) in a DB area – Jemena refer to Option 2 as Turnkey
<b>PROJECT MANAGER (PM2)</b>	All projects must have a project manager appointed by the developer who is responsible for the overall project management of their development and PM2 denotes that the developer has selected Option 2 (AusNet & Jemena) or 2A (Powercor) for the delivery of the contestable services
<b>POWERCOR COMPLIANCE AUDIT</b>	A non-conforming issue but considered not to warrant a minor non-compliance being recorded. Negligible safety or reliability risks perceived (Deduction: NA)
<b>POWER SUPPLY AUGMENTATION</b>	Upgrade works required on a DBs existing distribution system to provide the contracted electricity supply to each new lot
<b>PRE-COMMISSION AUDIT</b>	Jemena term – carried out to satisfy Jemena that the work completed is in accordance with Electrical Safety Regulations and Jemena standards, and if connected will not affect safety or reliability of the network, safety of its employees and the public
<b>PRE-COMMISSIONING INSPECTION</b>	AusNet term – inspection carried out by AusNet to confirm that if the installation were connected to the AusNet services network that the new installation will not affect the safety or reliability of the network, or the safety of its employees and the public
<b>PRECINCT STRUCTURE PLAN (PSP)</b>	Development of PSPs is overseen by the Victorian Planning Authority and the PSPs lay out roads, shopping centres, schools, parks, housing, facilities, employment, natural open space and connections to transport for new communities between 10,000 and 30,000 people
<b>RE-AUDIT (POWERCOR)</b>	If a re-audit is required due to a failed audit, the application should include information and evidence regarding how each audit non-compliance has been addressed or rectified
<b>SERVICE LEVEL AGREEMENT</b>	A commitment between a service provider and a client. Service aspects (eg quality, timelines, availability, etc) are agreed between the service provider and the service user

TERM	DEFINITION
<b>SPEAR</b>	Surveying & Planning through Electronic Applications & Referrals – allows subdivision planning permit & certification applications to be compiled, lodged, managed, referred, approved & tracked on-line anytime
<b>STATEMENT OF COMPLIANCE (SOC)</b>	Required under the Subdivision Act. Provided by a council to a developer once all public works (including electricity supply) and open space requirements placed on a proposal under the planning scheme or under the Subdivisions Act have been satisfied or adequate arrangements have been made to secure compliance with those requirements
<b>TIE-IN</b>	The physical connecting of the contestable services electrical infrastructure assets to the electrical distribution business network
<b>TITLE RELEASE</b>	Once a council is satisfied that all planning permit conditions and infrastructure requirements have been constructed to the satisfaction of all relevant authorities (including utilities) a statement of compliance is issued which allows the Titles Office to issue individuals titles for all newly created lots in a subdivision
<b>TOLERANCES</b>	These are the departures (+ &/or -) from the required construction standards that DBs will accept at the time of compliance audit
<b>UDIA</b>	Urban Development Institute Australia
<b>URD</b>	Underground Residential/Reticulated Distribution/ Development – generic industry term for underground distribution to households required in all new subdivisions
<b>VICTORIAN ELECTRICAL DISTRIBUTION NETWORKS (VEDN)</b>	A committee of VESI which is responsible for accrediting contractors who are involved in the civil aspects of underground electrical infrastructure
<b>VESI</b>	Victorian Electricity Supply Industry

## **SCOPING STUDY REPORT**

# ROLE OF UTILITIES IN THE SUBDIVISION APPROVALS PROCESS

JUNE 2018