

Regulatory Oversight of Connections, Augmentations and Customer Contributions	Powercor	Citipower	AGL electricity	TXU	United Energy (Managed by Alinta)	ESC Victoria	ETSA	ESCOSA - PROPOSED	Integral Energy	Energy Australia	Country Energy	Australian Inland Energy	IPART-NSW	ActewAGL	ACT - ICRC	Energex	Ergon	QCA - QLD
<b>Key Terms</b>	See ESCV	See ESCV	See ESCV	See ESCV	<b>Augmentation</b> - "an upgrade to the network by replacing, enhancing or adding plant and/or equipment" <b>Point of Supply</b> - normally where underground cable crosses boundary, on short aerial services at the first point of attachment to property - up to max 20 meters into property, or at the low voltage terminals of the substation/s for	<b>Augmentation</b> - "an upgrade to the network by replacing, enhancing or adding plant and/or equipment" <b>Point of Supply</b> - normally where underground cable crosses boundary, on short aerial services at the first point of attachment to property - up to max 20 meters into property, or at the low voltage terminals of the substation/s for	See ESCOSA	<b>Augmentation</b> - enlarge existing distribution capability  <b>Extension</b> - "works required for the connection of customer's supply address outside the boundaries of the distributor's distribution network that existed at the time that the customer's connection enquiry was made."	See IPART	See IPART	See IPART	See IPART	<b>Rural Customer</b> - "after diversity demand per kilometer of high voltage line is less than 300kVA or local council has zoned as rural" <b>Large Load Customer</b> - whose expected demand is such that the customer would require more than 50 per cent of the existing capacity to be augmented <b>Linkage Point</b> - a point on a network at which use of assets changes from dedicated to one or more customers to being shared amongst customers generally			Connection Assets - those assets that are for the exclusive use of the customer	Connection Assets - those assets that are for the exclusive use of the customer	<b>Individually Calculated Customer ICC</b> - customer consuming >40 GWh pa <b>Connection Asset Customer CAC</b> - customer consuming between 4and 40 GWh pa <b>Standard Asset Customer SAC</b> - customer consuming less than 4 GWh pa. <b>Embedded Generator EG</b>
<b>Contribution Regulations and LNSP Policy</b>	Applies to augmentations and extensions Non-discriminatory Applies only when the customer is expected to contribute less in network tariffs than the incremental cost of providing supply Customers whose ventures are considered speculative will bear the stranded asset risk	Policy currently being aligned with Powercor	See ESCV	See ESCV	See ESCV	Mutual negotiation between parties Fair and reasonableness test in disputes Contributions to connection and augmentation if and only if marginal revenue less than marginal cost No demand threshold Utility to justify if using other than 15 years' DUoS revenue for business customers	See ESCOSA	Governing Principles: Beneficiary pays Economic Signalling Transparency Ease of understanding Customers applying for a load less than 3% of substation contribution), rural connections are no RAB (ie contribution required). All customers may request a Cost Reflective Network Price - IE will tend to consider CRNP at 10 MW or 40 GWh.	Typically Integral will contribute transformer if capable of servicing other customers and located on initial customer's premises. Broadly, urban connection and equipping and irrecoverable material costs. All customers above 10MW may request a Cost Reflective Network Price - EA will consider a CRNP above 10MW	For supply at low voltage, EA will typically contribute the transformers and the switchgear and the customer funds the substation accommodation and equipping and irrecoverable material costs. All customers above 10MW may request a Cost Reflective Network Price - EA will consider a CRNP above 10MW	CE will bear the cost of reusable HV connection assets for multi-occupant developments. Dedicated large load Customers bear the costs of their direct connection works. Where the assets are likely to be 50% shared among other customers, Country Energy will contribute all the high voltage equipment and installation 66kV customers may request a Cost Reflective Network Price		A customer will pay for the direct costs of establishing the connection up to the connection point. In addition for Rural and Large Load Customers, DNSPs may require a contribution for augmentation. Customer contributions must: Reflect economic costs (ie subsidy free) Be transparent Be based on published costs and methods.	Economic connections are recovered from normal DUoS charges. A customer requesting a specification above standard pays the incremental amount by way of contribution charge. ActewAGL may charge the full amount of an uneconomic connection by way of a customer contribution. For underground subdivisions, ActewAGL funds the equivalent cost of the standard infrastructure (overhead construction), and the customer pays the additional cost of underground.	Electricity Distributor may charge a capital contribution for network development or augmentation: no charge for a standard connection (including 22m overhead line into property, 8m of underground cable or a combination) customer pays the additional costs of requiring infrastructure greater than standard Rural customers pay the connection costs less the average urban residential connection costs For economic loads (where the network revenue relative to the connection costs would render the connection unprofitable) - contribution may be up to the full cost of the work	Retail Franchise Customers are credited (annual franchise bill)/0.225 against the cost of connection assets. ICCs pay a fully cost reflective network tariff. CACs pay a standard DUoS usage charge for the upstream network assets (ie those used by the generality of customers) and a cost reflective fixed charge for the cost of connection, amortised over the economic life of the asset. Note that a proposed new Capital Contribution approach for unbundled retail and network components due to start 1 July 2004 will replace the 22.5% method.	Retail Franchise Customers are credited (annual franchise bill)/0.225 against the cost of connection assets. ICCs pay a fully cost reflective network tariff. CACs pay a standard DUoS usage charge for the upstream network assets (ie those used by the generality of customers) and a cost reflective fixed charge for the cost of connection, amortised over the economic life of the asset. Note that a CSO exists such that Franchise tariffs may be less than unbundled Network tariffs in some regions	Elected not to apply NEC Part E of Chapter 6. Require LNSPs to submit Pricing Principles for approval Agreed principles include: Pricing objectives of economic efficiency, simplicity, practicality and equity Appropriate signalling to network users of their impact on existing and future network capacity and costs, price stability and certainty, use of specific dedicated assets. No lower demand threshold for contributions.
<b>Contestability Regulations</b>	See ESCV	See ESCV	See ESCV	See ESCV	See ESCV	Contestable works precludes working on LNSPs existing network where safety issues exist Connection subject to tender unless labour < \$5,000 or customer gives explicit informed consent not to go to tender Licensee (ie LNSP) specifies design Licensee to inform a customer of the customer's right to a contestable construction process]. An offer to connect must be fair and reasonable	See ESCOSA	Extensions are contestable Augmentation is not contestable LNSP is design approval authority, in accordance with the design specification prepared by the LNSP at the customer's expense.	LNSP not obliged to quote for any Level 3 design or Level 1 construction work.	LNSP not obliged to quote for any Level 3 design or Level 1 construction work. (However, it should be noted that DNSPs have an obligation to connect and if no other contractor bids for the work - then the DNSP may be obliged to either quote a "reasonable market price" or do it on a cost recovery basis only.)	LNSP not obliged to quote for any Level 3 design or Level 1 construction work.	See IPART	All connection works (including design and construction) for which a contribution are required are contestable.	ActewAGL provides all connection works under the Act. Design authority rests with ActewAGL	Currently no contestability. Contestability and treatment of additions ("extensions") currently under review.	See QCA	See QCA	Customers have the right to engage 3rd party design and construction providers - however there is no significant market providing contestable works
<b>Regulatory Monitoring &amp; Oversight</b>	See ESCV	See ESCV	See ESCV	See ESCV	Complaint driven	Complaint driven determination process Annual monitoring (now discontinued) of number and value of offers involving augmentation by: exemption to tender customer called tender customer did not call tender Annual submission of Regulatory Accounts Requirement to have policy, procedures and practices for connections approved - will be soon revised to an obligation to publish only	See ESCOSA	ESCOSA may facilitate or determine disputes - primarily related to cost. Under the EPO costs must be fair and reasonable. Disputes on the design may be made to the technical regulator but would only consider the capacity, not the design standards, which remain the responsibility and right of ETSA	See IPART	See IPART	See IPART	See IPART	Complaint driven process - IPART's role is to monitor compliance with the determination and has no other powers. Annual submission of Regulatory accounts - which separates out cash contributions from gifted asset contributions	See ICRC	Complaint-driven review and determination Annual compliance review of licensed utilities Capital contributions currently not regulated. However ActewAGL does report the amount paid as capital contributions as part of the regulatory process.	See QCA	See QCA	Annual approval process for prices and pricing principles. Determination role in complaints. Annual submission of regulatory accounts Going forward will review capital contributions method(s)
<b>Connection Process &amp; Service Standards</b>	Budget estimate - indicative and non-binding available at no cost. Firm offer can be provided if customer contracts to use Powercor to perform the design and construction	Currently aligning process with Powercor		Preliminary estimate - indicative and non-binding at no cost. Firm offer - binding fixed price setting out breakdown of charges and identifying tasks that Approved Contractors are permitted to complete.	In most cases firm connection estimates are given at no cost. For large and complex connection works, budget estimates are given for no cost. Fees will apply for firm estimates. Will make a firm offer within 20 business days. Normally no bonds required. Assets constructed by third parties subject to acceptance by utility	LNSP provide offer within 20 business days of request or receipt of all relevant information 65 business days in case of embedded generation Licensee must request additional information with 10(30 for generation) days of request Assets constructed by third parties subject to acceptance by utility (not a regulatory obligation) Utility reserves right to require bond from customer to fund any remediation of third party works (not a regulatory obligation)	A codified process to facilitate customers gaining pricing certainty as quickly as possible, irrespective of whether ETSA or third party carries out the works. On request, ETSA will provide an indicative quote If customer proceeds with a formal application, ETSA will prepare a design specification which the customer pays for. The customer has the right to request ETSA or an approved third party to construct the extension assets. Where augmentation is required, ETSA has the sole right to construct such assets. A firm quote will normally be provided by ETSA within 20 business days of receipt of a formal application.	A codified process to facilitate customers gaining pricing certainty as quickly as possible, irrespective of whether ETSA or third party carries out the works. On request, ETSA will provide a verbal indicative quote If customer proceeds with a formal application, ETSA will prepare a formal offer based on a detailed design to meet the customer's requirements, which the customer pays for. The customer has the right to request ETSA or an approved third party to construct the extension and connection assets. Where augmentation is required, ETSA has the sole right to construct such assets. A firm quote will normally be provided by ETSA within 20 business days of receipt of a formal application.	Once a Level 3 design plan is submitted, IE will not provide an indicative quote as the work is contestable, but may bid for the work if requested. IE will not provide indicative prices	Once a Level 3 design plan is submitted, EA will not provide an indicative quote as the work is contestable, but may bid for the work if requested. EA will not provide indicative prices	Country Energy may provide indicative prices. See below	DNSP specified process	Self-imposed service standards apply, depending on the complexity of the project. Written internal procedures are followed to determine the appropriate levels of reliability, capacity and security.	ActewAGL required to connect customers providing the customer's installation meets ActewAGL's service and installation rules, the customer has a contract for electricity supply, etc (see cl 16.2 Consumer Protection Code).	A firm quote will be provided following receipt of application and supporting information as specified by the code.	A firm quote will be provided following receipt of application and supporting information as specified by the code.	Process set by LNSPs	
<b>Contribution Costing and Pricing</b>	Customer pays for that portion of the least cost technically acceptable method (Ictam) not covered by DUoS income plus any costs above the Ictam "Take or Pay" provisions exist in the event that actual load is less than requested load.	See Powercor		In a firm offer, TXU advises the maximum network contribution, which is deducted from the payable amount if TXU completes the work or paid by TXU when the lines are connected to the network if an Approved Contractor completes some of the work.	Customer pays for that portion of the least cost technically acceptable method (Ictam) not covered by DUoS income plus any costs above the Ictam. Customer does not normally pay a contribution - ie DUoS pays for connection and augmentation costs. For large business supply "Take or Pay" provisions exist in the event that actual load is less than requested load. Customers whose ventures are considered speculative will bear the stranded asset risk.	Amount of contribution determined by utility or by tender against utility design specification Typically based upon "least overall cost technically acceptable method" Maximum charge required to be no more than difference between incremental cost and incremental revenue over life of connection.	In addition to the formula based calculation (See ESCOSA), ETSA may apply a "take or pay" clause for anticipated DUoS, depending on circumstance, with a true-up process at the end of 3 years	Formula based calculation CP=(C+E+A+CC)-R Rebate = Z+3*DUoS Price is net of a rebate of 3year's DUoS plus a fixed amount	Once a Level 3 design plan is submitted, IE will not provide an indicative quote as the work is contestable, but may bid for the work if requested. IE will not provide indicative prices	Once a Level 3 design plan is submitted, EA will not provide an indicative quote as the work is contestable, but may bid for the work if requested. EA will not provide indicative prices	Country Energy will provide indicative prices from the pole (11kv), but not from zone sub (33/66kv). CE will provide an indicative augmentation cost.	"Augmentation assets will be the economic optimum size required given the customer's connection capacity and expected growth in other loads" Connection costs are determined by level 1 ASP quote Large customers may pay up front or over a period of time.	All applications for connections have an NPV analysis of forecast DUoS using the WACC as the discount rate, over the economic life of the assets to determine if a contribution is required	See Capital Contributions Code	Franchise: one off payment equivalent to cost-(1 year franchise revenue)/0.225. For SACs - generally Franchise 3 customers who take the standard connection are connected at no cost. Some prefer connections above standard and are required to pay a one of amount for the additional requirements. ICCs and CACs - cost of connection amortised over the economic life (up to 45 years) Energex retains the right to charge prudential guarantees over the first 10 years	Franchise: one off payment equivalent to cost-(1 year franchise revenue)/0.225 For SACs - one off payment equivalent to cost of connection ICCs and CACs - cost of connection amortised over the economic life (up to 45 years)	Principles and method submitted by LNSPs for approval. Currently, no capital contributions are required from ICCs and CACs. For SACs, there is an approved contribution methodology in the DNSPs' Pricing Principles Statements. From 2004-05, the distributors will no longer collect capital contributions from franchise customers on the basis of the existing government policy, which relates to franchise tariffs. Instead, the distributors will be required to determine capital contributions using their own methods, to be approved by the QCA.	
<b>Reimbursement Schemes</b>	Cost sharing limited to small business and domestic customers of less than 50kVA. Sharing period is 10.5 years.	See Powercor	Cost sharing limited to small business and domestic customers of less than 50kVA. Sharing period is 10.5 years.	Cost sharing limited to small business and domestic customers of less than 50kVA. Sharing period is 10.5 years.	Cost sharing limited to small business and domestic customers of less than 50kVA. Sharing period is 10.5 years.	10.5 year sharing period for use of shared assets - so called "Pioneer" schemes established under SECV - used at discretion of LNSP under limited circumstances - ESC consulting on whether to require LNSPs to have pioneer schemes	See ESCOSA	A reimbursement window for shared new extension assets of 7 years will apply to the current owning customer	Exists, but not yet utilised ie no reimbursements have been paid yet.	Exist, but not yet utilised	Where a reimbursement scheme exists (as flagged on GIS) a new customer will not be connected unless and until the contributing customer has been reimbursed.	A 7 year window exists for reimbursement to the initial contributing customer	None contemplated	None contemplated	Not required	Not required	Principles and method submitted by LNSPs for approval	

<b>Accounting Treatment</b>	See ESCV	See ESCV	See ESCV	See ESCV	See ESCV	Separate contributions account Gifted assets included at zero cost	See ESCOSA	ETSA contributed assets enter the RAB. Customer contributions are separately accounted for and do not form part of the DUoS calculation	RAB only incremented by LNSP's capital budget less customer contributions. Gifted assets included at zero cost. IE can earn its operating costs on contributed assets through DUoS.	RAB only incremented by LNSP's capital budget less customer contributions. Gifted assets included at zero cost	CE can earn its operating costs on contributed assets through DUoS, but not a return on the asset.		Assets paid for by customers excluded from DNSPs' regulatory asset base. However, as DNSPs take ownership of these assets they must maintain them. Maintenance costs for these assets are recovered through the standard DUoS tariffs.	Where a customer contributed asset displaces an existing regulated asset, ActewAGL loses the revenue.	Assets paid for by customers are gifted to ActewAGL and excluded from the regulatory asset base. ActewAGL maintains these assets and an allowance is made for the operating costs incurred.	The initial estimation deduction is a once off revenue deduction equal to the NPV of all future charges for contributed assets so that the asset can be included in the asset base for RoA and depreciation whilst recognising contributions in accordance with the code.	The initial estimation deduction is a once off revenue deduction equal to the NPV of all future charges for contributed assets so that the asset can be included in the asset base for RoA and depreciation whilst recognising contributions in accordance with the code.	The initial estimation deduction is a once off revenue deduction equal to the NPV of all future charges for contributed assets so that the asset can be included in the asset base for RoA and depreciation whilst recognising contributions in accordance with the code.
<b>Network Planning/Localational Signalling</b>	Business Development process and Network Planning process integrated to align network development where practical	See Powercor	System plan identifies any constraints	System plan identifies any constraints	System plan identifies any constraints. Information available on the website	Requirement to publish network plans to highlight network constraints and planned upgrades	See ESCOSA	Proposal is for ETSA to provide Demand Management Guidelines, including a-priori \$/kva zone based pricing to reflect average economic cost of augmentation thereby signalling areas of network constraint and providing a degree of certainty in relation to augmentation costs. However, extension costs remain to be determined through contestable processes	Electrical System Development Report highlights planned upgrades and network constraints. No indicative pricing offered - prices determined by tender/ASP level 1 proposal against approved design	Electrical System Development Report highlights planned upgrades and network constraints. EA would look further ahead than 10 years where appropriate. No indicative pricing offered for contestable work - prices determined by tender/ASP level 1 proposal against approved design	Electrical System Development Report highlights planned upgrades and network constraints. CE will provide indicative estimates of augmentation on request.		The Tribunal (ie IPART) expects the DNSP to take into account the potential for further network expansion in the medium term (5 to 10 years) when examining the requirement for augmentations and extensions. Would involve considering the availability of land for development, council zoning, as well as trends in the direction and rate of network expansion.	Network planning based on ACT Government land release program, load growth projections and quality of supply issues. No specific locational price signals apply. However, policy on uneconomic connections leads to locational price signals, especially in rural or more distant areas.	ActewAGL employs a 10 year planning horizon with regular reviews and annual updates. The ICRC proposes that in the future ActewAGL will publish a forward looking report at the beginning of the regulatory period. The report is to include an outline of the proposed capital expenditure program, the expected consumption and the maximum demand over the medium term and how prices relate to these price triggers. Annual updates are to be published.			
<b>Embedded Generation</b>	Clear guidelines published on process and compliance criteria for embedded schemes	See Powercor		Process is similar as for connection	Process and contribution methodology similar to connections	Guideline under development	Process is similar as for connection	No current policy on embedded generation. ESCOSA expect to develop some guidelines on embedded generation in the next 6 months.	Some generators have received considerable benefit from anticipated deferred augmentation.	Customer Driven, and customer unlikely to be given any credit for deferred augmentation as too complex and uncertain.	Customer Driven, and customer unlikely to be given any credit for deferred augmentation as too complex and uncertain.		No Determination in relation to Embedded Generation	Process would be similar to that for connection	No current policy on embedded generation	Process for application for an embedded generation scheme is the same as for connection	Process for application for an embedded generation scheme is the same as for connection	See pricing principles
<b>Quality of Website</b>	Clear and helpful process map, principles and guidance documentation	No search term matches - but note that Citipower currently aligning processes to Powercor	Could only find guidelines for new connections which assumes that the assets already constructed	Retail orientated. Unable to locate any relevant documents due to search facility being temporarily unavailable. We were guided by TXU to Customer Connection Guide, a helpful explanation of TXU's process located under "About TXU".	Connection process information not easily found. Guideline 14 is being developed as a replacement for G1 & 2, which will be available later this year. (Note that website font small) Alinta website WA focused.	Relevant information not easily found. Guideline 14 is being developed as a replacement for G1 & 2, which is being updated to reflect outcome of Price Determination 2001-05. We were directed to the consultation section of the website by ESCV	Search on capital contributions explains that customers may be required to contribute to the cost of upgrades, but no explanation provided of methodology or principles	Search on capital contributions yielded final determination on chapter 3 of the Distribution Code. Clear explanation of the issues and principles underlying the regulatory treatment of connections and contributions	Could not find relevant documents from the menu or search terms. We were guided to "terms and conditions" by IE representatives, wherein relevant information on connection arrangements was found under General Terms and Conditions Section 1 (General) and Section 2 (General Requirements).	Could not find relevant documents from the menu or search items - The capital contributions document is ES8 and is found under <a href="http://www.energy.com.au/e/a/earetail.nsf/Content/ElectrictyStandards_OurNetwork">http://www.energy.com.au/e/a/earetail.nsf/Content/ElectrictyStandards_OurNetwork</a>	Capital Contributions Guidelines. Clear documentation on connection process and contribution requirements using illustrated examples	Web site not available at time of search	Capital contributions document found under IPART/electricity. Background to the approach and underlying principles explained	Standard Connection Contract - contains an explanation that costs of extension and or increase in capacity of network may apply, but no explanation of principles or methodology given. Service and Installation Rules are also available.	Search on capital contributions yielded Capital Contribution Code (June 2001). - Note that web-site font was very small.	Search on connections yielded description of the process for connection but this assumes that the assets are already constructed	Search on connections/network information yielded pricing principles statement	Pricing principles statements for Ergon and Energex found on first page under electricity