DEPARTMENT OF PLANNING, INDUSTRY & ENVIRONMENT

Electricity Supply (Corrosion Protection) Regulation 2020

Regulatory Impact Statement

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Summary

The current Electricity Supply (Corrosion Protection) Regulation 2014 (current Regulation) came into force on 1 September 2014 and is due for automatic repeal on 1 September 2020.

The draft Electricity Supply (Corrosion Protection) Regulation 2020 (draft Regulation) has been prepared to replace the current Regulation on 1 September 2020.

The draft Regulation proposes a number of changes to the current Regulation but maintains the objective of the regulatory framework, which is to minimise the damage that corrosion protection systems (CPS) may pose to third party assets and ensure public safety by requiring system operators to have their systems approved and registered on a public register.

The key changes in the draft Regulation include:

- excluding from the Regulation CPSs that are permanently underwater and galvanic anode systems with a maximum current that does not exceed 250 milliamperes
- including a requirement to operate the CPS in accordance with Australian Standard series AS 2832
- requiring that interference testing of CPSs be conducted by a tester with qualifications in accordance with those stipulated in Australian Standard series AS 2832
- allowing CPS owners to apply for an extension to the 7-year testing schedule limit in reasonable circumstances, with the written approval of the Secretary
- modernising the Regulation to remove unnecessary clauses and to streamline the Regulation with that in other jurisdictions.

This Regulatory Impact Statement (RIS) has been prepared as part of the making of the draft Regulation.

This RIS should be read together with the draft Regulation.

Consultation process

Making a submission

Submissions can be provided by interested organisations or individuals on any aspect of the draft Regulation or other relevant matters, whether or not it is addressed in this RIS.

All matters raised will be carefully considered and any necessary amendments made to the proposed Regulation.

The proposed Regulation will be finalised and published on the NSW Legislation website to enable it to commence on 1 September 2020.

We invite you to read this paper and provide any feedback in writing by **30 June 2020**.

Please forward your feedback to **energy@planning.nsw.gov.au** with **"[Your name/organisation] Submission – Draft Corrosion Protection Regulation 2020"** in the email title.

1. Objective and rationale of the draft Regulation

1.1 Objective

The objectives of the *Electricity Supply Act 1995* (ES Act) are:

- to promote the efficient and environmentally responsible production and use of electricity and to deliver a safe and reliable supply of electricity, and
- to confer on network operators such powers as are necessary to enable them to construct, operate, repair and maintain their electricity works, and
- to promote and encourage the safety of persons and property in relation to the generation, transmission, distribution and use of electricity, and
- to ensure that any significant disruption to the supply of electricity in an emergency is managed effectively.

The ES Act allows regulations to be made for the installation, use, maintenance and removal of corrosion protection systems (CPSs) and stray current sources, including but not limited to the following matters:

- the examination or testing of such systems or sources,
- the approval or registration of such systems or sources,
- the stamping or labelling of such systems or sources,
- standards for such systems or sources,
- fees for the approval, registration, examination or testing of such systems or sources,
- the provision of documents, reports or other information concerning such systems or sources.

The draft Regulation will be made under the ES Act to promote and encourage the safety of persons in relation to the use of electricity through CPSs.

The aim of the draft Regulation is to minimise the damage that CPSs may pose to third party assets and ensure public safety by establishing a CPS framework that:

- allows asset owners near a CPS to be aware of the system's existence (so as to be able to take steps to protect their asset from interference), and
- ensures that the system is operated properly so as to not cause excessive interference to other assets. While this risk would be mitigated to some extent because it is in the interests of CPS owners to operate and test correctly to protect their asset, these interests may not fully mitigate against the risk of a major public safety incident.

1.2 Rationale

The draft Regulation is necessary as it will provide the legislative support and administrative detail necessary for the effective operation of the ES Act.

It is necessary to make the draft Regulation because on 1 September 2020, the current Regulation will be subject to automatic repeal under the provisions of the *Subordinate Legislation Act 1989*.

2. Options considered

2.1 Approach to impact analysis

Stakeholders who will be affected by the Regulation and therefore considered in this impact analysis include:

- owners and/or operators of metallic structures in NSW
- related persons exposed to the activities of owners and operators of metallic structures in NSW
- corrosion protection industry contractors and consultants
- NSW Department of Planning, Industry and Environment
- the general public.

The RIS has taken the above parties into consideration.

2.2 Option 1 – allow Regulation to automatically repeal

Under this option the Regulation would be allowed to lapse on 1 September 2020 and there would be no regulation of CPSs in NSW unless required by other NSW regulations.

2.2.1 Compliance Costs

This option would remove regulatory obligations from owners of CPSs and owners of metallic structures would be unable to access information about the presence or adequacy of CPSs in their vicinity. This could lead to damage to these structures which would require repairs and, if the damage is significant, could result in major public safety incidents.

In the absence of regulation prescribing standards and requirements there would be no guarantee that CPSs would be operated and tested appropriately.

It is possible that voluntary arrangements may arise but there would be no guarantee that all CPS owners will voluntarily comply. As a result, there would be an increased risk of damage to nearby structures caused by CPS interference, as well as to public safety and interruption to essential services of energy, water, communication and transport.

2.2.2 Administrative costs

This option will provide minor savings in relation to administrative costs. The ongoing administrative and compliance costs to NSW Government associated with managing the corrosion protection register and reporting regime is estimated to be $90,000 per annum. These costs are partially recovered from industry through the annual registration fee of $90, which are paid by system owners.

2.2.3 Impact on competition

There are no foreseeable impacts on competition as the Regulation was not designed to regulate competition in the industry.

2.2.4 Social and environmental impacts

There would be an increase in the risk of environmental impact from this option as there would be greater risk of damage from CPS interference without a public CPS register.

2.2.5 Benefits

The benefit associated with this option is a removal of the regulatory burdens imposed on owners of CPSs. The benefits associated with this option are low and outweighed by the costs mentioned above.

2.2.6 Conclusion

This option is not considered appropriate. The overall benefits of this option are considered to be low. A summary of the costs and benefits for this option can be found in section 2.5.

2.3 Option 2 – allow Regulation to be remade without changes

This option would maintain the status quo by remaking the existing Regulation as it is.

The current Regulation includes the following elements:

- the Department's application and approvals process for CPS
- the Department's register of approved CPS
- operation, maintenance and testing requirements for CPS
- reporting on CPS
- qualifications of persons who work on CPS, and
- penalty notice offences.

2.3.1 Compliance costs

These include the following direct costs imposed on the corrosion protection industry as a result of the regulatory requirements and include the following:

- costs related to applying for approval to operate the CPS, including registration fees
- costs related to the operation and maintenance of the CPS
- costs related to the retesting of the CPS
- costs related to annual reporting on CPS.

The RIS for the remake of the Regulation in 2014 determined that the annual compliance cost for system owners is estimated to be over $1,000,000, based on the maintenance, testing and fees associated with the existing arrangements. Adjusting for consumer price index, this would be approximately $1,085,316 in 2020.

Costs will vary depending on the size of the business and are provided as an indication only.

A complication in ascertaining accurate compliance costs is that it is in the interest of CPS owners to protect their asset by operating and testing the system correctly. The requirements in the Regulation are largely to ensure CPS owners are aware of nearby assets and to reduce the risk of a major public safety incident if excessive interference from a CPS causes damage to nearby assets.

Given that it is prudent for CPS owners to take steps to protect their asset in the absence of any legislative requirements, compliance costs for this Regulation are difficult to fully quantify. This is consistent with analysis undertaken by Queensland and Victoria.[1]

2.3.2 Administrative costs

The ongoing administrative and compliance costs to NSW Government associated with managing the corrosion protection register and reporting regime is estimated to be $90,000 per annum. These costs are partially recovered from industry through the annual registration fee of $90, which are paid by system owners.

2.3.3 Impact on competition

There are no foreseeable impacts on competition since the Regulation will pose no barriers to enter the corrosion protection testing market.

Costs arising from this issue are not relevant and have thus not been quantified.

2.3.4 Social and environmental impacts

No major social or environmental costs or community impacts have been identified.

2.3.5 Benefits

There are three benefits of Option 2:

1. ability for third parties to access information about the location of CPSs so they are aware of any CPSs near their own infrastructure and are able to work with the owner to minimise any risks to nearby assets
2. reduced risks to assets and the community arising from infrastructure failure resulting from corrosion, and
3. maintenance of current protections that reduce safety risk arising from interference to nearby structures.

2.3.6 Conclusion

There is no change to the costs and benefits under Option 2 compared to the current Regulation. Remaking the Regulation without amendment would largely meet the objectives of the ES Act.

However, it would be an opportunity lost to make minor changes to ensure the Regulation is supporting the ES Act's objectives as efficiently and effectively as possible. A summary of the costs and benefits for this option can be found under section 2.5.

[1] Queensland Department of Justice and Attorney-General, Regulatory Assessment Statement – Review of the Electrical Safety Regulation 2002, p.57.

2.4 Option 3 – allow Regulation to be remade with changes

This option would remake the existing Regulation with the changes outlined in Table 1.

Table 1 Proposed changes to Regulation and rationale

Clause to be amended or removed	Proposed amendment(s)	Rationale
4 - Application of Regulation	Exclude from the Regulation: a) CPSs that are permanently underwater	Clause 15 of the Regulation stipulates that the operator of an approved CPS must ensure that an interference test is conducted by a qualified tester in accordance with an approved testing schedule or otherwise at least once every seven years. This requirement presents a challenge to underwater CPSs, as technically these systems cannot be tested. The language proposed is similar to that exempting underwater CPSs in Victoria's and Queensland's regulations.
4 - Application of Regulation	Exclude from the Regulation: b) Galvanic anode systems with a maximum current that does not exceed 250 milliamperes	A limit of 250 milliamperes is consistent with that prescribed in other jurisdictions. Analysis from the Victorian Government has suggested that these galvanic anode systems are operating at such a low current that they are highly unlikely to cause damage to underground or underwater structures.[2]
13 – Operation of CPSs	Provide that the CPS must be operated in accordance with the cathodic protection standard relevant for that system within Australian Standard AS 2832.	Australian standards are published documents setting out specifications and procedures designed to ensure products, services and systems are safe, reliable and consistently perform the way they are intended to. They establish a minimum set of requirements which define quality and safety criteria. The Australian Standard AS 2832 series has specific requirements for CPS operation that is generally accepted by industry. The AS 2832 series are voluntary standards in NSW, meaning that they represent best practice but are not an automatic legal requirement as compliance against them is not required by any legislation. It is proposed that the Regulation be amended to include a requirement to comply with Australian standards when operating a CPS. Both Queensland and Victoria have included a legal requirement for owners of CPSs to comply with the relevant Australian standards.

[2] Energy Safe Victoria Consultation Paper – Proposed Electricity Safety (Cathodic Protection) Regulations 2019

14 – Maintenance of CPSs	Remove clause	Maintenance requirements for CPSs are not specified in AS 2832 or in other jurisdictions. Therefore, removing this clause will streamline the regulation with other jurisdictions and AS 2832. Removing this requirement is unlikely to result in perverse policy outcomes from a safety perspective, as there is an inherent incentive for CPS owners to maintain their systems appropriately in order to protect their asset.
15 – Testing of CPSs	Require that interference testing is conducted by a tester with qualifications in accordance with AS 2832, rather than with 'appropriate qualifications'.	The Australian Standard AS 2832 series has specific requirements for qualifications needed to conduct CPS testing that are generally accepted by industry. During consultation, stakeholders were supportive of a requirement that CPS testing be done by a person with qualifications in accordance with AS 2832.
15 – Testing of CPSs	Allow a CPS owner to apply for an extension to the 7-year testing schedule limit where it is reasonable to do so, with the written approval of the Secretary.	Clause 15 of the current Regulation provides that an interference test should be conducted on a CPS in accordance with the testing schedule set out in the application of the system and at least once every 7 years. There could be instances where it may be reasonable to extend the 7-year testing schedule limit. For example, where testing cannot be conducted due to extreme weather events or where the system needs to be replaced. In these instances, this amendment would allow the CPS owner to apply to the Department for an extension to the testing schedule. Further, this amendment would give the Department a certain level of flexibility in determining whether it is appropriate in certain cases to grant an extension to the testing schedule, based on a risk-based approach and with the agreement of nearby structure owners. Neither Queensland nor Victoria prescribe time limits on testing CPSs. This amendment will modernise the Regulation in NSW by providing additional flexibility while ensuring safety.
17 – Qualifications of persons who work on CPSs	Remove clause	Clause 17 of the current Regulation stipulates that any person who works on a CPS must either be certified as a corrosion technician by the Australasian Corrosion Association Inc. (ACA) or hold a qualification that is approved by the Minister by order published on the NSW legislation website. To date, the Minister has not approved any alternative qualifications under this clause. This means that the current framework requires all persons who work on a CPS to be certified as corrosion technicians by the ACA. The draft Regulation removes this clause for several reasons. Primarily, the scope of the term 'work' under this clause is broad and may encompass a range of

		operations for which corrosion protection industry qualifications are not required. There are a number of different training and qualification programs to certify a person who undertakes technical and non-technical CPS work. If the Regulation was overly prescriptive on what these qualification requirements should be, it may create unnecessary red tape for businesses and prevent a qualified and competent person from undertaking work on CPS. Furthermore, the regulatory burden for industry to ensure all work on the CPS is undertaken by a qualified corrosion technician is quite high. To enrol in a corrosion technician certification program with the ACA, the applicant must be a financial ACA member or corporate member's representative and must have at least four years work experience in corrosion or a corrosion-related position. These requirements assume not only an annual financial commitment to the ACA, but also a high level of experience of the applicant to the certification program.
21 – Penalty notice offences and clauses	Moved contents of clause to Schedule 1 – Penalty notice offences and penalties	This is to tidy up the penalty offence clauses in the Regulation in line with modern legal drafting conventions. There are no operational implications as a result of this change.

2.4.1 Compliance costs

Option 3 will likely see a reduction in compliance costs compared to option 2. This is primarily due to removing the requirement in clause 17 for persons operating a CPS to be certified as corrosion technicians by the Australasian Corrosion Association.

Further changes to compliance costs compared to option 2 are likely to be impacted by:

- removing the requirement in clause 14 for persons operating an approved CPS to maintain it in accordance with its design specifications, and
- including requirements relating to compliance with Australian Standard AS 2832.

These changes aim to align the regulatory requirements with those in other states which would likely reduce costs for industry overall, making it easier for businesses operating across different jurisdictions to do business in NSW.

2.4.2 Administrative costs

Option 3 will likely see a small reduction in the administrative costs compared to that of option 2 as a result of excluding CPSs that are permanently underwater as well as galvanic anode systems with a maximum current that does not exceed 250 milliamperes.

There may be a minor one-off cost incurred by DPIE for IT support to modify the CPS database to allow for testing frequencies longer than seven years.

2.4.3 Impact on competition

There are no foreseeable impacts on competition since the proposed changes to the Regulation will pose no barriers to enter the corrosion protection testing market.

2.4.4 Social and environmental impacts

No major social or environmental costs or community impacts have been identified.

2.4.5 Benefits

Option 3 does not propose substantial changes to the current Regulation. As a result, all of the benefits of option 2 are retained for option 3.

The changes to the Regulation proposed in option 3 provides the following additional benefits:

- reduced regulatory burden on industry by aligning the regulatory requirements under the NSW regime with other jurisdictions. This will allow CPS owners who have assets in different jurisdictions to streamline their protection systems.
- simplification of the Regulation to ensure that the objectives of the Regulation can be achieved without additional red tape on industry. This includes removing unnecessary clauses while maintaining a high industry standard for operation and testing of CPS. This accords with the NSW Government's better regulation principles, one of which states that 'the simplification, repeal, reform, modernisation or consolidation of existing regulation should be considered'.[3]

2.4.6 Conclusion

Option 3 provides the benefits of the existing legislation while making some minor changes that strengthen the objects of the Act and do not impose any unnecessary financial or administrative burdens on the industry or the government. Summary of the costs and benefits for this option can be found in section 2.5.

2.5 Costs and benefits comparison summary

Option	Likely costs	Likely benefits	Overall benefit
Option 1	High	Low	**Low**
Option 2	Low	Medium-High	**Medium-High**
Option 3	Low	High	**High**

2.6 Preferred option

The preferred option is option 3, as it presents additional benefits to options 1 and 2.

Option 3 proposes a variety of changes to the current Regulation that have been consulted on with industry. The changes streamline the Regulation with other jurisdictions, and simplify the Regulation in accordance with the NSW Government's Better Regulation principles. The

[3] NSW Government Guide to Better Regulation, January 2019.

proposed changes would not significantly alter the operation of the current Regulatory framework, meaning that all the benefits of option 2 would be retained in option 3.

Options 2 and 3 are largely similar in terms of costs (noting that compliance costs for the industry are difficult to quantify).

Option 1 would allow the Regulation to repeal and is the least preferred option as without the Regulation in place the risk of damage to assets and major public safety incidents would increase.

3. Background

3.1 Corrosion protection systems

Corrosion can be defined as the destruction of a metal through its adverse reaction to a particular environment, for example soil or water.

A CPS is a system which applies an electrical current to a metallic (primary) structure to protect the structure from corrosion caused by its contact with soil or water. The major underground metallic structures in NSW include pipelines and cables used to transport electricity, gas, telecommunications and water throughout NSW, but can also include large structures such as steel piled wharves.

Metallic structures, such as cables, pipes and buildings made from reinforced concrete, are at risk of corrosion where they are buried in soil or immersed in water. There is also a risk of corrosion from the effects of stray electrical currents from electrified transportation systems such as the NSW electrified rail system. Corrosion can result in significant maintenance costs.

There is over $18 billion worth of underground metallic structures in NSW, many that deliver water, gas, electricity and telecommunication services. The majority of CPS owners and operators are large corporations or bodies who own or operate buried or immersed structures for the purpose of providing utility services.

The regulatory framework in NSW for CPSs is similar to that in Victoria and Queensland.[4] South Australia, Tasmania, Western Australia and the Australian Capital Territory do not formally regulate the use of CPSs.

3.2 Requirements of the *Subordinate Legislation Act 1989*

The *Subordinate Legislation Act 1989* provides for the staged repeal of statutory rules, including Regulations, every five years. The aim of the *Subordinate Legislation Act 1989* is to improve the quality of regulatory proposals and to assess the economic and social impacts of the Regulations and other options before they are introduced. This process helps to ensure that Regulations have continuing relevance and provide the best approach to meeting the objectives proposed.

The *Subordinate Legislation Act 1989* relates to the making and staged repeal of subordinate legislation such as Regulations. The *Subordinate Legislation Act 1989* requires a RIS to be prepared for a Regulation.

A RIS must:

- state the objectives of the Regulation and the reasons for them
- assess the costs and benefits of the proposed Regulation
- identify the other options
- assess the costs and benefits of the other options (including the option of doing nothing)
- evaluate which option will provide the most cost-effective outcome, and
- describe the consultation program to be undertaken.

[4] See *Electricity Safety (Cathodic Protection) Regulations 2019* (Vic), part 13 of *Electrical Safety Regulation 2013* (Qld).

Where possible, costs and benefits should be quantified. Where quantification is not possible, the anticipated impacts of the proposed Regulation and the other options should be described to facilitate a clear comparison of costs and benefits.

This RIS has been developed following consideration of and compliance with these requirements, as well as NSW's better regulation principles, described in Part 3.3 of this RIS.

3.3 Better regulation principles

The NSW Government's Guide to Better Regulation lists principles which characterise good regulation and the minimisation of red tape.

The following principles are to be followed in the development of every regulatory proposal:

- The need for government action should be established
- The objective of government action should be clear
- The impact of government action should be properly understood by considering the costs and benefits of a range of options, including non-regulatory options
- Government action should be effective and proportional
- Consultation with business and the community should inform regulatory development
- The simplification, repeal, reform or consolidation of the current regulation should be considered
- Regulation should be periodically reviewed and, if necessary, reformed to ensure its continued efficiency and effectiveness.

4. Need for government action

4.1 Nature of the problem

The owners of metallic structures may install CPSs to protect their own assets. However, the electrical currents from these CPSs may cause the corrosion of other nearby metallic structures in the ground that belong to other owners, which poses a significant risk to major assets.

Negative externalities occur when the consumption of certain types of goods and services imposes costs or harm to unrelated third parties, and this cost is not reflected in prices. In this case, negative production externalities, arising from the use of CPSs, result from stray currents interfering with or damaging third party assets.

In general, government action to address externalities should be limited to actions with significant public benefits.[5] If stray current interference from a CPS causes a structure used to transport electricity, gas, telecommunications or water to fail, it can jeopardise both public safety and the delivery of essential services. As more power lines and gas pipeline assets are installed underground to meet growing needs in already crowded areas, the risk from CPSs to nearby structures is likely to increase with time.

Furthermore, without some form of regulation or effective alternative, the owners of these nearby assets may not know when a CPS is installed near one of their assets due to the invisibility of stray current and the length of time over which corrosion can occur. This

[5] NSW Government Guide to Cost-Benefit Analysis, March 2017.

knowledge asymmetry would prevent these asset owners from acting to protect their structures from interference, further exacerbating the risk of damage.

4.2 2010 Better Regulation Office review

In December 2010, the NSW Better Regulation Office released a final report on the *Review of New South Wales corrosion protection regulation* (BRO review).

The BRO review conducted extensive consultation with industry stakeholders, including releasing an issues paper, meetings with industry participants and consideration of stakeholder submissions. These consultation processes informed recommendations in the final report.

Informed by these views, the BRO review found that a public CPS register is an effective way of addressing risks to metallic structures because it provides information to third parties about the location of CPS. This allows CPS owners to see the location of nearby CPS and work with the owner of the neighbouring CPS to minimise any risks to nearby assets. The review also recommended that the NSW Government administer and mandate the use of the register to ensure that all system owners are required to provide the information about their systems to a central public register, which can be found online at https://energy.nsw.gov.au/government-and-regulation/legislative-and-regulatory-requirements/corrosion-protection-systems.

The final report made the following recommendations:

1. A public register detailing all operating CPSs should be maintained. Systems that are currently exempt from registration (under clause 4 of the Electricity Supply (Corrosion Protection) Regulation 2008) will continue to be so. This register will record details such as the system number, system owner, contact person, location, and approved operating conditions (including retesting period). Only one owner shall be registered for each system.
2. The register should be maintained by NSW Government. It should be clarified in the ES Act and Electricity Supply (Corrosion Protection) Regulation 2008 that no liability accrues to the NSW Government as a result of administering the CPS register.
3. The regulatory regime should be operated on a cost recovery basis. An appropriate regime which covers the Department's costs in managing the regulatory regime will be developed with Treasury.
4. In order to facilitate compliance with the Regulation, each system owner shall submit an annual return to the Department about the CPSs currently operated by the owner as at 30 June to confirm matters recorded on the register. In line with the performance regulation approach adopted for electricity and gas in NSW, this annual return shall be submitted by the CEO of the system owner. The report must also include a corrective action and timeline for addressing any noncompliance identified in the return.
5. CPSs should only be required to be registered once. Retesting periods will vary according to risk levels and be specified as a condition of registration when the CPS is presented for registration, as is currently the case. It is an offence to operate a CPS that has not been registered or has not been retested in accordance with the legislation.
6. It should be clarified that CPS owners are responsible for CPSs maintenance and testing, and compliance with all registration and notification requirements under the Regulation, including submitting an accurate annual return. Failure to do so is a breach of the legislation and can lead to the Department cancelling registration and/or imposing penalties.
7. The Department should inform CPS owners and testers about their obligations under the Regulation and ensure that there is effective communication between the Department and the industry, including advance notification of CPSs due for retesting.

8. The Department should be given the power to issue penalty notices for offences under the Regulation.
9. The Department shall conduct periodic reviews of the register to identify any non-compliance. Any noncompliance identified shall be brought to the attention of the CEO of the CPS owner. The owner will be requested to submit an explanation within 30 days as to why enforcement action should not be taken and also a corrective action report.

4.3 Consultation

Stakeholders consulted as part of this staged repeal process, as well as part of the BRO review, emphasised the importance of a government-supported regulatory framework to ensure public safety and the reliability and integrity of assets.

4.3.1 Corrosion protection system register

In their submissions to the BRO review, most stakeholders rejected the idea of a privately-owned CPS register, including one that was mandated by Government, citing the high complexity and cost required. Stakeholders also rejected the idea of multiple private registers, citing issues of overlap and complexity. Energy Australia submitted:

> "For practical reasons, the register should remain with the regulator… While it's possible that a third party could manage the operation of a CPS register there would have to be effective legislation written around the implementation, operation and management of a third party controlled CPS register. It is also likely that this arrangement would lead to an increase in cost to CPS operators which would have to be passed onto the community."

There is an option for a privately-owned register available. The Dial Before You Dig (DBYD) service was established by underground asset owners to prevent damage to their buried assets. This service coordinates information about the location of existing underground assets and makes that information available to potential excavators. The issues paper released in the BRO review explored whether the DBYD service could be a low-cost option to establish an industry CPS register.

However, most stakeholders did not support this, pointing out the distinction in motives in providing information between DBYD members and CPS owners: the former have a common interest in protecting their assets from excavation work while the latter do not have the same incentive to disclose information about stray current impacts on third parties.

4.4 Operation requirements

CPS owners have an incentive to ensure that the CPS is properly operated as this protects their asset. Indeed, there appears to be a high level of self-regulation by CPS owners to comply with the national standards for these systems with respect to ongoing operation and maintenance matters. The relevant Australian Standard for the installation, design, operation and testing for CPSs is the *AS 2832 – Cathodic protection of metals* series, which contains five parts. The aim of these standards is to provide the required protection with the minimum amount of current.

Despite the incentive for CPS owners to ensure their systems are correctly operated, there is no guarantee that all CPS would be operated in accordance with these standards without legislation mandating compliance. When considering the likely impacts to other assets, essential services and public safety, government intervention is necessary to regulate at least a minimum level of operation of these systems.

4.5 List of Stakeholders Consulted

The Department has undertaken consultation with the NSW Electrolysis Committee, consisting of members from:

- Ausgrid
- Sydney Trains
- Sydney Water
- Jemena
- Endeavour Energy
- Corrosion Control Engineering
- Freyssinet.

As previously mentioned, the 2010 BRO review undertook extensive consultation with industry stakeholders.