

# Accelerated Capital Allowances Eligibility Criteria

*Category:* Electro-Mechanical Systems

***Technology:* Voltage Stabilisation**

Voltage Stabilisation is defined as equipment designed to control the delivered output voltages within a specific acceptable range. It also provides for efficient use of electrical energy in electro-mechanical devices when the supply voltage variations fall outside of the specific acceptable range. Typical voltage stabilisation equipment includes voltage optimisers, voltage regulators and voltage stabilisers.

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## Eligibility criteria

To be included on the ACA Specified List, Voltage Stabilisation equipment must meet *all* the requirements set out below.

**Note:** *Supporting documentation that clearly demonstrates ACA compliance according to the conditions below will be required as part of the ACA checking process. Detailed information on the types of documents accepted can be found in the separate Supporting Documentation guidelines.*

No.	Condition
1	The device must control the output voltage within a 1% range of set point when the supply voltage falls between the levels of 207V and 243.8V single-phase, or associated 3-phase voltages if a 3-phase unit.
2	Where the unit is three-phase, the unit must be capable of providing an equal three-phase output (balanced) in cases where the input supply voltages are not equal.
3	Insertion losses of the unit must not exceed an overall average of 1% over the ranges of 20%, 40%, 60%, 80% and 95% rated output load. The average shall be calculated as being the weighted average of each of the individual insertion losses in % terms.  The defined connection profile is that the connected load will be 20% rated load for 10% of the time, 40% rated load for 20% of the time, 60% rated load for 30% of the time, 80% rated load for 30% of the time, and 95% rated load for 10% of the time.
4	The device must have a nominal output power rating of greater than or equal to 10kVA and less than or equal to 2MVA.

5	All equipment and/or components must be CE-marked as required by the specific EU directive(s).
6	<p>Documentation must be supplied with the unit that provides clear indications to the purchaser of expected savings in sample installation situations, outlining (a) the initial supply voltage, (b) the final controlled voltage and (c) the type of equipment connected.</p> <p>This will also include situations where savings are minimal or zero for (a) the case where existing supply voltages lead to minimal savings, and also separately for (b) the case where the supply voltages are high but significant amounts of installed equipment do not readily lend themselves to energy savings.</p> <p>The documentation shall provide a clear indication to the end-user of the types of equipment that do NOT typically provide savings when connected to these devices.</p>
7	Appropriate installation, operating and maintenance manuals, including a wiring diagram, must be available for the end-user as part of the main contract of sale, along with any specific software or commissioning tools required in order to maximise the achievement of any potential efficiency improvements when installed.

----- *End of ACA eligibility criteria* -----

*Please see next section for guidance on:*

- 1. Technical details required in product submission**
- 2. Supporting documentation required**

## Guidance on product details and supporting documentation

***NOTE: The following information is not part of the official criteria document published within the relevant Statutory Instrument. It has been added here for guidance purposes only in order to help you to provide (a) product details and (b) the required supporting documentation.***

*All information contained in this guidance document is subject to change without notice.*

### Technical information required in product submission

The following are the specific technical values required as part of the product submission for this technology:

#### **Voltage Stabilisation Equipment type**

As part of the product submission you must select which type of equipment your product is, either single phase or three phase. Only one type can be chosen per submitted product.

#### **Nominal Power Output Rating (kVA)**

The nominal power output of the product in kVA is required as a value for the product submission. It must be entered as a number only without unit symbols. There should also be no spaces or full stops after the number submitted. The figure must be greater than 10kVA and less than 2000kVA.

### Supporting documentation required

Described below is the list of documents that are accepted as proof of compliance for the specific Voltage Stabilisation condition.

**Note: This information will only be requested AFTER you submit your product's basic details online**

#### **Important Notes to Product Providers**

**Please ensure that you read the "Important Notes for Product Providers" section at the end of this document prior to submitting documentation.**

No.	Condition	Supporting Documentation Requirement
1	The device must control the output voltage within a 1% range of set point when the supply voltage falls between the levels of 207V and 243.8V single-phase, or associated 3-phase voltages if a 3-phase unit.	Official and published manufacturer's technical data sheet or brochure that demonstrates compliance with the requirements of the condition.
2	Where the unit is three-phase, the unit must be capable of providing an equal three-phase output (balanced) in cases where the input supply voltages are not equal.	Official and published manufacturer's technical data sheet or brochure that demonstrates compliance with the requirements of the condition.
3	<p>Insertion losses of the unit must not exceed an overall average of 1% over the ranges of 20%, 40%, 60%, 80% and 95% rated output load. The average shall be calculated as being the weighted average of each of the individual insertion losses in % terms.</p> <p>The defined connection profile is that the connected load will be 20% rated load for 10% of the time, 40% rated load for 20% of the time, 60% rated load for 30% of the time, 80% rated load for 30% of the time, and 95% rated load for 10% of the time.</p>	<p>Official and published manufacturer's technical data sheet or brochure that demonstrates compliance with the requirements of the condition. The values used for determining the insertion losses must be portrayed in these documents.</p> <p>An overview of how the insertion losses were calculated according to the method detailed in the condition must also be supplied, e.g. copy of excel spreadsheet detailing calculation.</p>
4	The device must have a nominal output power rating of greater than or equal to 10kVA and less than or equal to 2MVA.	Official and published manufacturer's technical data sheet or brochure that demonstrates compliance with the requirements of the condition.

No.	Condition	Supporting Documentation Requirement
5	<p>All equipment and/or components must be CE-marked as required by the specific EU directive(s).</p>	<p>Official and published manufacturer's technical data sheet or brochure that demonstrates CE marking compliance</p> <p><b>OR</b></p> <p>A copy of an official signed declaration on headed paper that confirms CE marking compliance.</p> <p><i>Official declarations should explicitly state the product for which CE marking is being confirmed (i.e. do not provide a letter simply stating general compliance with the relevant ACA condition).</i></p> <p><i>Where a document is used to demonstrate conformance for a number of products or range of products, it should clearly specify each individual product covered by that document.</i></p>
6	<p>Documentation must be supplied with the unit that provides clear indications to the purchaser of expected savings in sample installation situations, outlining (a) the initial supply voltage, (b) the final controlled voltage and (c) the type of equipment connected.</p> <p>This will also include situations where savings are minimal or zero for (a) the case where existing supply voltages lead to minimal savings, and also separately for (b) the case where the supply voltages are high but significant amounts of installed equipment do not readily lend themselves to energy savings.</p> <p>The documentation shall provide a clear indication to the end-user of the types of equipment that do NOT typically provide savings when connected to these devices.</p>	<p>A copy of an official signed declaration on headed paper which confirms the requirements of the condition.</p> <p>Official declarations should explicitly state the requirements that are being confirmed (i.e. do not provide a letter simply stating general compliance with the relevant ACA condition).</p>

No.	Condition	Supporting Documentation Requirement
7	Appropriate installation, operating and maintenance manuals, including a wiring diagram, must be available for the end-user as part of the main contract of sale, along with any specific software or commissioning tools required in order to maximise the achievement of any potential efficiency improvements when installed.	<p>A copy of an official signed declaration on headed paper which confirms that the appropriate operating and maintenance manuals are provided. Where applicable, information on the availability of technical documentation to download online should be given.</p> <p><b>NB:</b> A signed declaration is required to comply with this condition in all cases. Submitting copies of user manuals is not sufficient and not required by this condition.</p>

## Important notes for product providers

### ***General***

There should be a clear link between the product submitted and all supporting documentation. This will typically take the form of a *product code* or *product name* that can be cross-referenced between the submitted product and the relevant supporting documentation.

If product codes/names have been changed since publication of the supporting documentation, then you must provide official evidence of this with the supporting documentation supplied.

If there is any deviation from these requirements, the supporting documentation will not be considered adequate for the purposes of demonstrating compliance with the criteria conditions. This will in turn delay the submission and/or result in the product not being considered eligible.

Where the ACA criteria or help documentation makes reference to compliance with appropriate rather than specific standards, the onus is on the product provider to ensure that the supporting documentation supplied references recognised standards that apply to the submitted product, i.e. the product must be covered under the scope of a recognised standard.

If it is subsequently found that any product submitted does not meet the performance or specification criteria, it will cease to be considered eligible for the ACA.

**Note:** When supplying the supporting documentation through the online process, you must ensure, when demonstrating compliance with the relevant condition, that the correct page number(s) of the document is referenced. When referencing more than one page number, add an explanatory note.

### ***Test report***

A test report must include an outline of the complete test, including:

- √ Introduction
- √ Details on test conditions
- √ The specific model details of the product tested
- √ The steps taken in the test
- √ The results
- √ Graphical representations
- √ Conclusion

All documents should be on headed paper and the document should be officially signed off. **All documentation must be in English**, or include adequate translation.

## ***Certification***

Where certificates are provided, all tests must be carried out by an organisation that is accredited by a national accreditation body, recognised via the European Cooperation for Accreditation (preferred) or the International Accreditation Forum. **All documentation must be in English**, or include adequate translation.

## ***Scientific equivalence***

Some ACA criteria conditions allow for scientifically equivalent tests and/or standards to be used.

If a product has not been designed, manufactured or tested to the specific standard named, then documentation relating to an equivalent internationally recognised standard may be used, where the phrase '*or scientific equivalent*' is included in the ACA condition or help documentation.

In such applications, the onus is on the product submitter to demonstrate satisfactory equivalence of the standards. Submissions which reference such supporting documentation may take longer to process. If the product provider does not provide satisfactory evidence of equivalence, then the product will not be considered eligible for the ACA. **All documentation must be in English**, or include adequate translation.

**Note:** Where specific standards are cited in a condition or in the ACA help documentation, then documentation demonstrating that the relevant products have been designed, manufactured or tested to these specific standards is preferred. Scientific equivalence is considered the exception rather than the norm.

## ***Representative testing***

Where test information is required for a range of technically similar products (e.g. configurations of one base product), then – in exceptional instances – a form of representative testing may be used once *agreed in advance* with SEAI.

Such testing is where only representative products are tested from a technically similar group or range of products. Representative testing may form an acceptable basis for supporting documentation if:

- A clear correlation can be demonstrated between the tested product and a technically similar non-tested product
- and*
- Such a correlation clearly demonstrates the compliance of the non-tested product

**Note:** Where representative testing is used for a group or range of products, if the tested or representative product is removed from the list of eligible products then all related products are also removed.

