



# VO PROPOSAL

FOR:

**Johnson Aggregates**



**West Midlands, England**





# WHAT WE DO...

Electrical Mechanical & Cooling Limited are an engineering company who have been in business for over 20 years. We are an expert M&E service provider and independent supplier of critical power and cooling solutions for critical, industrial and commercial operations.

Our independent status means that we are always working to find and install the best technology for your specific project and site needs

We pride ourselves on our craftsmanship, technical expertise, compliance knowledge and project delivery.

We are always working to keep your site protected, optimised and energy efficient.

Our sister company Emissis deliver a powerful suite of globally patented, innovative energy reduction solutions that save their clients money by lowering energy bills whilst reducing their carbon emissions.

Core technologies include Voltage Optimisation (VO) & Stabilisation, Commercial Energy storage, EV charging and PV + Battery and Coolnomix. EMC deliver, via our in house engineering team an energy efficient end to end solution from Site Survey - ROI analysis & payback guarantees - Installation - Monitoring and Verification.

## WE WORK WITH:

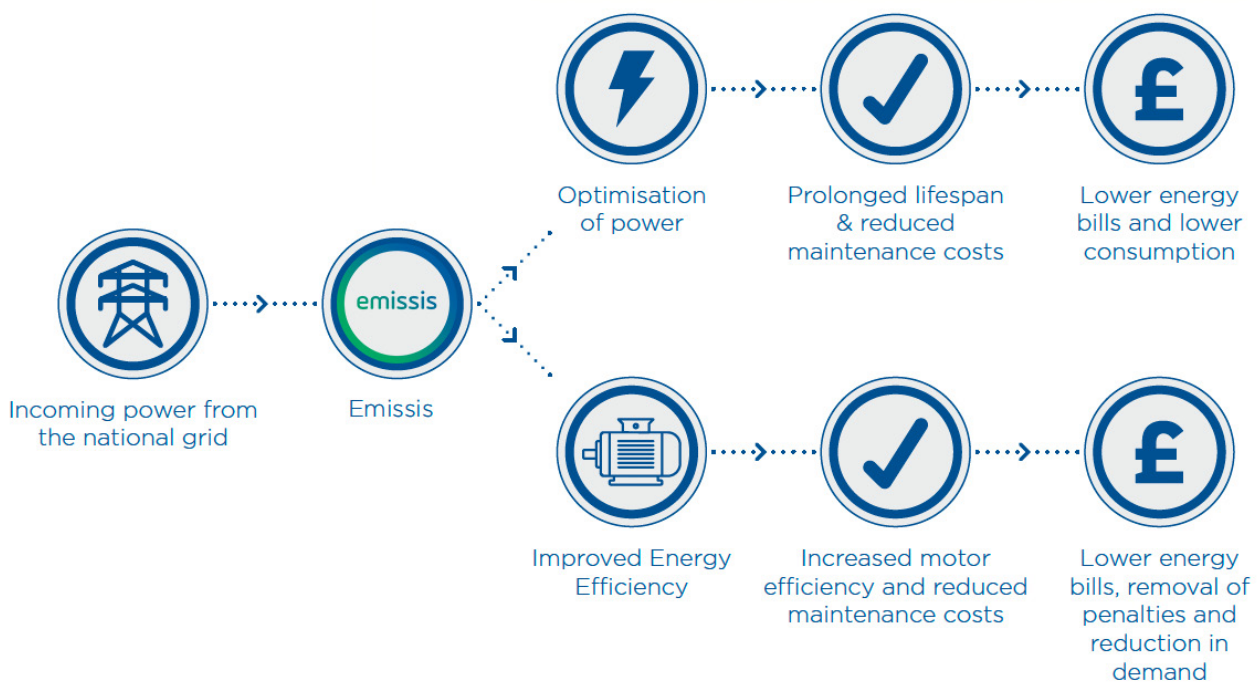




## HOW DOES VO WORK...

The National Grid delivers, on average, 242 volts to all UK users. With voltage optimised, electrical equipment works at optimum cost efficiency at 220volts. All supply above 220v is waste.

Through Ohm's law, optimising voltage on any supply produces instant kWh savings of up to 19%, which will give an instant reduction in electricity bills and carbon footprint. In addition, and as confirmed by the UK's wiring regulations (BS7671), any electrical equipment required to work at 242v, will suffer a reduced working life by up to 46%.





## SUPPLY 1 - MAIN SITE

Annual Electrical Consumption (kWh):	1,388,097.60
Annual Electrical Spend:	£584,966.11
Day & Night Rate Supply Price:	£0.42 & £0.32
VO unit size:	EMC3x500 - 12

**Equipment Cost (inc installation) - £25,000.00 + VAT**

	10%	8%
Annual Consumption Reduction	138,809.76 Kwh	111,047.81 Kwh
Annual Carbon Savings	39,005 CO2Kg (234 Trees)	32,204 CO2Kg (194 Trees)
Annual Electricity Cost Reduction	£58,496.61	£47,797.29
Payback	5.13 Months	6.41 Months



## Voltage Optimisation Guarantee & Warranty

All our voltage equipment is supplied with a 15 year manufacturers equipment warranty that confirms (warrants) that the equipment supplied will continue to deliver the voltage reduction guaranteed and will operate efficiently for a minimum of 15 years from date of installation. Our equipment is installed with an expected lifespan of 30 + years subject to a 5 year service plan.

We guarantee that your Voltage Optimiser will continue to deliver the voltage reduction specified in our Energy Savings report. After a full site power survey the finalised savings report will confirm the reduced voltage figure, your sites confirmed load profile together with the percentage of energy consumption that has been disregarded to allow for equipment that delivers little or no energy savings from voltage optimisation.

The initial Savings Guarantee, pre site survey, confirms the energy savings that a 10% and 8% reduction in electrical consumption will deliver. Our intelligent power monitoring & verification optimiser will support your guarantee by giving you access to the following data:-

- Confirm the exact optimised voltage and energy saving in line with your site load profile & voltage dependency
- Allow you to compare your electricity bills and HHD both with and without your EMC optimiser
- Allow you to switch between the grid supply voltage and the optimised voltage allowing to compare electrical consumption with and without the EMC optimiser.

**If you are not achieving the confirmed reduction in power consumption, confirmed post site survey, we will guarantee a one -off payment to cover the shortfall.**

**We further guarantee that if your voltage equipment has not paid for itself (including the cost of installation) within 3 years we will reimburse you in full and let you have the use of the optimiser for free.**

**Note: For accurate data comparisons to be made, pre and post optimisation, consideration needs to be made for any additional equipment installed or removed. In addition, if the operating time of the electrical equipment & appliances changes due to production time increasing or decreasing this will clearly affect power consumption & savings.**

Our equipment suppliers of over 20 + years and EMC have never been asked to reimburse any client. Together we have installed over 5000 optimisers and can offer case studies & referrals across every UK industrial & commercial sector that will reinforce the savings that our optimisers are delivering.



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HM Revenue  
& Customs

Policy paper

## New temporary tax reliefs on qualifying capital asset investments from 1 April 2021

Published 3 March 2021

### HMRC Announce 130% Tax Relief on any VO Capital Equipment Purchase.

#### Who is likely to be affected

Companies within the charge to Corporation Tax who invest in plant and machinery on or after 1 April 2021.

#### General description of the measure

This measure will temporarily introduce increased reliefs for expenditure on plant and machinery.

For qualifying expenditures incurred from 1 April 2021 up to and including 31 March 2023, companies can claim in the period of investment:

- a super-deduction providing allowances of 130% on most new plant and machinery investments that ordinarily qualify for 18% main rate writing down allowances
- a first year allowance of 50% on most new plant and machinery investments that ordinarily qualify for 6% special rate writing down allowances

The measure also temporarily amends the rules covering expenditure incurred on plant and machinery used partly in a ring fence trade in the oil and gas sector.

#### Policy objective

This measure is designed to stimulate business investment. It does so by increasing the incentive to invest in plant and machinery by offering higher rates of relief than were previously available.

#### Background to the measure

Capital allowances allow businesses to write off the costs of tangible capital assets, such as plant or machinery, against their taxable income. They take the place of commercial depreciation, which is not an allowable tax deduction.

First-year allowances allow enhanced rates of relief for certain plant and machinery investments, providing claims are made in the period the expenditure is incurred. The super-deduction is an enhanced first-year allowance providing an allowance exceeding the cost of the asset.

Any investment or expenditure on new Emissis Voltage Optimisation (VO) Equipment, from April 1st 2021 up to March 31st 2023, will qualify for the new 130% tax relief rate. This measure effectively reduces the tax adjusted cost of capital for millions of companies, large and small, investing in qualifying VO plant & machinery.

**As an example, any Emissis client spending 100k on new VO plant & machinery will be able to claim tax relief of £24,750 against the capital investment.**



# Voltage Optimisation

## Dynamically Designed Voltage Optimisation & Energy Saving Technology

### TECHNICAL CHARACTERISTICS

#### FEATURES

- Ultra Low Loss Transformer Technology 99.9% Efficiency
- Selectable Voltage Output (-10v, -15v, -20v, -25v)
- Minimum 5 years Warranty voltage optimiser uk
- Very Low Maintenance
- Wide Range of Models to Suit All Environments
- Permanent Power Ratings
- Efficient Toroidal Transformer Design
- Overcurrent Protection – MCCB
- Integrated Isolation
- High Overload Capability
- Patented Design
- Range 1kVA to 8,000kVA





# Voltage Optimisation

Saving cash, reducing carbon

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Join our Growing List Of UK Companies Enjoying  
The Financial Savings & Benefits of Reduced Voltage...

