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DIGREN ENERGY COMPANY INFORMATION

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SAFE	Safe Electric registered
ELECTRIC	
	ISO9001 - 2015 BD EN ISO 9001:2015
Qualitas Veritas 860 9000 2015	Certificate number 000656
ASHRAE	Member Ashrae number 5192849
CRC Association of Energy Engineers	Member AEE number 142736



ABBREVIATIONS & DEFINITIONS

Annual Quantity of kWh used within a 12 month period.			
AUP	Actual Unit Price of electricity or gas. All costs (excluding VAT) divided by the actual consumption. NOTE: AUP is considerably higher than the unit cost (UC).		
CED	Contract End Date		
CRU	Commission for Regulation of Utilities		
DEB	Digren Energy Bureau		
ESBN	ESB Networks Designated Activity Company		
ETRM Energy Trading & Risk Management			
ETCI Electro-Technical Council of Ireland			
EV	Electric Vehicle		
EVCP	Electric Vehicle Charging Point		
DSO	Distribution System Operator		
DUoS	The set of tariffs paid by suppliers to the DSO in respect of use of the distribution system for each connection point registered to them.		
GP General Purpose			
GPNH	General Purpose Night Storage Heating		
GPNS	General Purpose Night Saver		
HH Half Hourly			
I-SEM Replaced SEM on 1st October 2018			
kW	Kilowatt		
kWh	A kilowatt-hour is the unit of measurement used by gas and electricity suppliers.		
kVA Kilovoltampere. (1,000 volt amperes). The kVA value is equal to tkW value divided by the power factor.			
LEU	Large Energy User		
LVMD Low Voltage Max Demand			
MCC	Meter Configuration Code		
MIC	Maximum Import Capacity		
MRSO	Meter Registration System Operator		
NQH	Non Quarterly Hour		
PES	Public Electricity Supplier		
PIR	Periodic Inspection Report		
QH	Quarterly Hour		
SEM	Single Electricity Market		
SONI System Operator in Northern Ireland			
TSO	Transmission system Operator		
TUoS	Transmission Use of System Charges		
UC	Unit Cost. This is the cost of the unit per kWh (electricity and/or gas) as it appears on your supplier contract or rate card.		
VAQ	Verified Annual Quantity from the MRSO		
WC Meter Whole Current Meter			

TARIFF RELATED SERVICES

METER PROFILING: The transmission and distribution costs are dictated by ESB Networks and Eirgrid. In many cases the Maximum Import Capacity (MIC) is not suitable for the premises. It is your responsibility to ensure you have the correct MIC. Digren Energy Management go through your bills over the past 12 months and analyse the usage. We then break this down for you and make recommendations to change your MIC if required.

TARIFF ANALYSIS: Using your MRSO AQ data Digren will make a recommendation of the correct tariff best suited to your organisation.

CAPACITY ADJUSTMENTS (MIC): We will handle all the paperwork, including submission of NC3 form to ESB Networks and we can monitor your new charges for the year ahead and benchmark them against the previous 12 month period.

METER UPGRADES: If Meter changes are required we will handle all the paperwork and we can monitor your new charges for the year ahead and benchmark them against the previous 12 month period.

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REPORTING

BILL VALIDATION: When customers sign up to a contract with an energy provider, it is important to ensure the contracted rates agreed are been delivered in the invoice. Digren Energy management will do a review of each invoice when released by the energy supplier to ensure the rates charged are as per the contract, thus ensuring you are maximising any savings. I have attached a brochure showing an example of what we deliver per meter per billed supplier invoices.

MONTHLY ENERGY REPORTS: It is important to understand and monitor your energy costs and consumption, so you can compare monthly and yearly time frames. This allows you to look initially on what you might need to reduce consumption and therefore your costs. Digren Energy Management will deliver a monthly report on your energy costs, consumption and carbon emissions.

COMPARATIVE DATA UPLOAD: Our standard reporting operates from an agreed starting point after Digren have been engaged as your energy consultants. The more data our system has the better the information we can provide. We offer a service whereby we can upload up to two years of your previous energy data to enable comparative reports be available immediately.

PROCUREMENT & TRADING

ENERGY PROCUREMENT is the sourcing and identification of the gas and electricity contracts that best suit your individual business needs. Business contracts can be extremely complicated and the energy market highly volatile. We offer fixed price procurement and trading supply contracts for larger energy users.

Digren Energy Management will:

- **Procure** on behalf of the customer to deliver the most efficient energy supply contract.
- **Fix** these rates (where applicable) from rising for a period of up to three years.
- **Trade** energy (where applicable) on behalf of our client.
- **Publish** independent price assessments for Natural Gas Markets.
- Support your contracts and negotiations by showing our findings.
- Respond quickly to market changes.

ENERGY MARKET INTELLIGENCE: (FOR TRADING AND RISK MANAGEMENT PRODUCTS)

By understanding the pricing components that go into calculating your price for electricity and gas, you will be better prepared to ask questions about what is and is not included in the quoted price, and therefore be better positioned to make decisions about which product, offer and supplier will work best for your business. Digren Energy Management trading department help you manage your electricity and gas prices to maximise savings.

- Provide a richer and far greater customer experience and increase your satisfaction in the process.
- Get access to automatically updated market reports, energy contract info, and position trade management.
- Deliver customised market reports to your business requirements and then gain valuable insights into their behaviour with our built-in analytics tool.
- Allow you to access your content on a secure online platform fully integrated in your own web portal.
- Deliver the best product and price solution for your business.
- Complete energy hedging on your electricity and gas contracts and deliver the required reports backing the decision to hedge.

ENERGY TRADING & RISK MANAGEMENT (ETRM)

Currently, this service is only available to Digren Energy Bureau Clients with tradable contracts. Energy hedging can be very beneficial for companies — or not. This shouldn't be a surprise; energy prices are inherently volatile, fluctuating with supply and demand, political tension and climate issues. Energy hedging can protect companies against the risk of unexpected price surges, and energy suppliers can lock in prices for future output to help them meet or surpass financial targets.

To make these decisions, good analytics help. By using energy trading and risk management (ETRM) market intelligence, Digren help companies reduce the risk of adverse price movements. As the gas and energy market becomes more complex, ETRM systems are becoming vital tools for companies wanting to achieve savings over and above the tracked market pricing.

Of course, hedging is not perfect, it can insulate too much when the market is favourable but bearing in mind that the exact same energy for the exact same customer at the exact same time could have cost 10% more by not hedging underlines the value that such activity can bring.

When a provider prices a tradeable contract they provide a forecast of costs. These are done using the AQ confirmed by the MRSO. This makes it easy for Digren to compare costs and savings.

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ADDITIONAL METER RELATED SERVICES

CHANGE OF TENANCY: On the day you move into your new business premises, make sure you read the gas and electricity meter and ideally take a photo of the readings. The readings have to be provided to the company currently supplying the building. Once you move in to your new business premises, the current energy suppliers will automatically continue to supply the premises – this is known in the trade as a 'deemed contract.' Essentially, this means that until you change supplier the existing contractor already supplying the premises has a contract to continue to do so - unless they are told otherwise. The same process is to be applied if you are leaving a premises as well, as you are accountable for any charges unless you completed the correct processes.

Digren Energy Management will complete this process for you and get all necessary paperwork completed.

DE-ENERGISATION / RE-ENERGISATION:

The deliberate prevention of the flow of electricity between the Distribution System and the facility through the Connection Point for any purpose other than a System Outage over a short period of time to complete additional works at the premises. Also, the reconnection of the flow of electricity after the works are completed can be managed directly on your behalf by Digren Energy Management.

METER DISCONNECTION:

You may wish to contact ESB Networks to completely disconnect the electricity supply from a building in any of the following scenarios:

- 1. A fire has occurred in the building
- 2. The building is to be refurbished
- 3. The building is unoccupied and may be a safety hazard.
- 4. The building is to be demolished

Digren Energy Management can complete all the necessary paperwork and interact with ESB Networks or Gas Networks Ireland on your behalf.

TEMPORARY GENERATOR SUPPLY:

A standby generator is used for emergency power generation in the event of the loss of mains electricity supply. It does not operate in parallel with mains supply. A standby generator may be used in the case of:

- 1. A planned electricity interruption by ESB Networks
- 2. A fault on the electricity network
- 3. A storm or third party damage to the electricity network

Digren can assist in selecting a temporary supply and ensuring it is Installed correctly. Options range from traditional gen-sets to pre charged battery drop offs.



TEMPORARY SUPPLY (CONSTRUCTION INDUSTRY)

Temporary supplies for the construction industry need to be looked at very closely as significant savings can be made. The connection charge for a builder's connection is twice the Standard Charge for business connections and twice the associated network charge (on the basis that the standard connection charge includes a 50% allowance). The connection will be provided for a single purpose, e.g. construction; and will be terminated after a fixed period, i.e. re-use of connection will not be permitted.

Digren can assist with advising and setting the optimum capacity for the site. Each site and the impact on the grid is different. Digren will liaise with networks and the site project manager and complete all NC3 and additional paperwork, as required. We will upload the temporary supply MPRN and manage the consumption and billing. Digren will complete the disconnection of the meter on completion of works.

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SUB-METERING

SUB-METERING: Electrical submetering involves the installation of power meters also called (power monitors, electrical meters, or energy monitors) that can measure energy usage after it reaches the primary utility meter. Submetering offers the ability to monitor energy usage for individual tenants, departments, pieces of equipment or other loads to account for their actual energy usage. The Benefits of Submetering include:

- Accurate energy monitoring, real-time energy consumption
- Granular in-depth review of facility energy data
- Better informed to make decisions that can help optimise energy performance
- Ability to record actual energy usage (Not estimates)
- Comparison of usage across similar facilities over time
- Ability to identify and eliminate wasted energy
- Early access to maintenance issues for repair before critical equipment fails

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ENERGY MONITORING AND TARGETTING

ENERGY MONITORING AND TARGETING is an energy efficiency technique based on the standard management axiom stating that "you cannot manage what you cannot measure". Monitoring and targeting techniques provide companies with feedback on operating practices, results of energy management projects, and guidance on the level of energy use that is expected in a certain period.

The foundation of monitoring and targeting lies in determining the normal relationships of energy consumptions to relevant driving factors (HVAC equipment, production through puts, weather, occupancy, available daylight, etc.) and the objective is to help companies:

- Identify and explain excessive energy use.
- Detect instances when consumption is unexpectedly higher or lower than would usually have been the case.
- Visualise energy consumption trends (daily, weekly, seasonal, operational...).
- Determine future energy use and costs when planning changes in the business.
- Diagnose specific areas of wasted energy.
- Observe how changes to relevant driving factors impact energy efficiency.
- Develop performance targets for energy management programs.
- Manage energy consumption, rather than accept it as a fixed cost.

The ultimate goal is to reduce energy costs through improved energy efficiency and energy management control.



ENERGY AUDITS

ENERGY AUDITS: An Energy Audit is a review of how you use your energy and more importantly where it is being wasted. It is the first step towards energy management and energy cost savings.

In carrying out an energy audit, we first identify and evaluate all energy uses, and then make recommendations on implementing a strategic energy plan over a number of years. We rate the recommendations according to investment cost and payback period. We always recommend that the first implementation of any energy management plan focuses on 'zero investment-energy awareness'. Thereafter, many of the recommendations will pay for themselves through energy savings in a short time frames.

The audit process involves inspecting all areas of the facility identifying energy use and potential energy wastage. Every piece of equipment that consumes electricity is identified and listed. This includes production and process plant, lighting, heating, cooling, computers, office machines, vending machines, water coolers, and other energy consuming devices. As information is gathered patterns of energy use are established.

The audit effectively becomes the road map to energy reduction. Depending on the facility we would agree an energy reduction target for the next three years. Our objective would be to re-audit every year to evaluate recommendations against implementation.

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ENERGY MANAGEMENT PLANS

ENERGY MANAGEMENT PLAN: An Energy Management Plan involves the planning and operation of energy resources and energy consumption. It is important to integrate the energy management plan (EMP) into the organisational structure, so that the EMP can be implemented. Responsibilities and the interaction of the decision makers should be regularised. The delegation of functions and competencies extend from the top management to the executive worker. Furthermore, a comprehensive coordination can ensure the fulfilment of the tasks.

Continuous improvement of energy performance requires establishing effective energy management practices and processes to guide the energy program. Any organisation, regardless of size, function, or mission can develop an effective energy program if they are willing to make the commitment.

The Guidelines for a successful EMP follow seven main steps that are outlined below

- 1. Make Commitment
- 2. Assess Performance
- 3. Set Goals
- 4. Create Action Plan
- 5. Implement Action Plan
- 6. Evaluate Progress
- 7. Recognize Achievements



ELECTRICAL INSPECTIONS

ELECTRICAL INSPECTIONS Electrical installations can deteriorate with age and use. It is recommended that electrical installations are inspected and tested periodically as appropriate to their use and environment to verify compliance with the National Rules for Electrical Installations – ET101.

A Periodic Inspection Report (PIR) is a report and not a Completion Certificate. A PIR is intended to identify the condition of an electrical installation, be it good or bad. Digren's Registered Electrical Contractors are registered with SAFE ELECTRIC and can carry out periodic inspection and testing in line with the National Rules for Electrical Installations.

Digren then provide a copy of their PIR accompanied with the completed Test Record Sheet to the client explaining the next steps required of the client to bring the installation in line with the relevant standards.

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LIGHTING SCHEDULES

LIGHTING SCHEDULES: One of the most essential aspects of producing a quality lighting schedule is to ensure that the lighting products specified are actually acquired and installed on a project.

The purpose of a lighting schedule is to chronicle the lighting products (and their locations) required to achieve the lighting design intent. The documentation needs to be clear and precise and typically includes the following three components: an outline specification, a lighting fixture schedule, and product data/manufacturer catalogue sheets.

The lighting fixture schedule is usually in the form of a chart, matrix, or table. It provides a list of fixture types, which are keyed to the lighting drawings. It typically includes a brief description of the product, a manufacturer product ordering number, and lamp information (including lamp type, wattage, voltage, beam spreads, and colour temperature, if applicable).

Digren Energy Management electrical contractor division will work directly with you in delivering a lighting schedule suited to your business requirements.

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EV - CHARGING POINTS

ELECTRIC VEHICLE CHARGING POINTS: Electric vehicles are becoming more and more popular and consequently the national grid is increasing. Digren Energy are focused on delivering turnkey engineered commercial EV charging solutions. Environmental awareness and legislation are driving the EV market and in our opinion it is essential that businesses are given the right information and options to enable them achieve what is the best fit for their business.

Digren will carry out a full site survey identifying your key current and future expectations for EV. We analyse all costs (Infrastructure, Capacity increase, Maintenance and Insurance).



MICROGENERATION - SOLAR PV

Solar PV is an extremely effective microgeneration solution. Unlike, CHP or turbines once installed there is minimum associated maintenance. It is also very easy to establish at desktop level what the actual cost of the generation is. With high energy costs Solar PV is an ideal solution for generating a portion or all (if possible) of your electricity requirements. This can fix your cost against the ROI for all future generated power from your system.

In addition, Solar PV can be offered through funded PPA's where you avoid any capital expenditure and you pay and agreed kwh price for the power generated through the Solar PV system for an agreed period of time.

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ENERGY STORAGE SOLUTIONS - BATTERY

Batteries can be used in a number of applications. As storage for micro generated power. For example, if your facility operated 5 days a week and you had a solar PV system installed. The battery storage could store the energy generated outside of normal operating hours and then release the power back into your system on demand.

Batteries can be used to balance excess loads to prevent exceeding your set capacity and thus avoiding excess charges. Another application for batteries is to have them charge / recharged at night time on a night rate and have the power used during the day. Effectively, operating your daytime requirement and paying for the off peak night rate.

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OFF GRID SOLUTIONS

Off Grid solutions are becoming more popular. Generally, these options are only financially viable when the cost of a grid supply to a remote area is excessive. Off grid solutions are not static gensets. An off grid system is a stand alone micro generation system.

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HYBRID SOLUTIONS - ENERGY SUPPLY

Hybrid solutions are becoming the most popular choice for business operations. This a solution custom designed to your specific requirements and usually combines a number of generating technologies such as CHP, solar Pv and smart storage. The management of these systems allows the client future proof requirements and avail of any government or network incentives that may be applicable. For example, a five day week operation may want to sell the power they generate back to the grid or contractually agree to be off grid at peak hours.

Digren can assist you in designing a hybrid solution that best suits your needs.



PROJECT FUNDING

PROJECT FUNDING: Finding funding for a project can be a minefield. There are many options available to clients ranging from fully funded projects to grant assisted. However, the bottom line is that the client will ultimately always pay for the project.

The challenge is to balance the potential energy reduction with the required investment. We present each option clearly and make recommendations to best suit a clients' specific requirements - both short term and long term.

The good news is that power generators, distributors and suppliers of gas and electricity have a common objective to reduce consumption to efficient levels – effectively eliminating waste. As a result of this there are many options available for energy users to partner with third party organisations to achieve reductions in consumption.

Digren will look at all funding options available and breakdown the pros and cons with each option. We will work with your own facilities and finance team to establish a solution that fits all your company requirements.

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NETWORK CHARGES AND RELATED CHARGES

There are Network charges when applying for new connections, MIC increases and in some cases MIC reductions. ESB Networks send out a connection agreement which clearly outlines all costs to be paid to ESB Networks for the required works. The connection agreement will also outline any additional work which is required to be done prior to them commencing their works. In the case of a substation room or building, ESB Networks will provide a specification covering the dimensions and the construction details. Where a site is required, the specification for the dimensions and the civil works will be provided. The above details will be issued together with, or in advance, of the quotation for connection, as appropriate.

RELATED CHARGES

Every time an Electrical Contractor completes a new electrical installation, extension, or modification to an existing installation they are obliged to test and certify that the installation complies with current standards. A validated Electrical Completion Certificate must be sent to ESB Networks by the electrical contractor's regulatory body before any connection work can commence. This is the clients direct responsibility and the associated cost.

In addition, the connection agreement from ESB Networks could outline a list of works required to be in place prior to any of their works commencing. Digren can provide electrical contracting services or work with your own contractor to ensure timelines are achieved.

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GENERAL CONSULTANCY

For our Digren Energy Bureau clients we will provide consultancy services in all areas pertaining to energy management.

HYBRID SOLUTIONS - ENERGY SUPPLY

The Digren Energy Bureau was developed to help clients control costs, benchmark expenditure and consumption against previous years and to offer clients advice and assistance in all their energy strategy planning stages.

The Digren Energy Bureau is tailored to suit all energy users. Whether you are an SME using 500,000 kWh - 4GW per year or a large energy user using >4GW our energy bureau can work for you. The objective of the bureau is to form a partnership with a shared objective to reduce consumption and control energy usage.

It can be very frustrating managing energy costs. One of the most important aspects of managing energy is controlling the costs – not just on capital expenditure but also contractual expenditure.

The deregulation of the Irish Energy Market has made the cost of energy more competitive for energy users but also more complicated to understand exactly what role each sector delivers to the energy user. In very simple terms, generators generate power, the Networks are responsible for the distribution and transmission of the power, the energy provider/supplier is responsible for the sale of the energy to the energy user and the energy user has the right to choose whichever provider/supplier they want.

However, with this deregulation came a degree of 'separation of responsibility'. The energy user now has the choice of provider/supplier but has the responsibility for items that previously would have been part of the supply agreement (pre-deregulation). For example, the energy user is now responsible for meter reads (for NQH), change of tenancy, setting correct capacity level, meter disconnection and for trading (if applicable).

The Digren Energy Bureau (DEB) is a partnership with companies who have genuine interest in controlling and managing their usage. Our philosophy is very simple – if you focus on consumption reduction then cost reduction automatically follows.

A partnership like this doesn't happen over-night, it takes time to build. However, from the very beginning there should be a clear indication of expectations on both sides. Therefore, our Energy Bureau contract has been designed with simplicity in mind to give Digren the tools needed to achieve results and to give the clients easy terms for termination of the Energy Bureau contract if results aren't being achieved.

There are many energy brokers, consultants and management companies in the industry to choose from. At Digren Energy we like to think we operate a little differently to our competitors. We genuinely believe in developing long term relationships with our clients. In reality, it takes 3 to 5 years to sustainably drop energy consumption. The exception to this is if you have large amounts of available capital to invest in energy saving projects.

IMPORTANT TO NOTE:

Since deregulation and the emergence of third party intermediaries placing contracts on behalf of clients it is important to clarify how third parties are paid.

It is common practice for third parties to be paid either a flat fee or a commission fee paid residually against your consumption. **NO** third party provides procurement services for free.

Many providers use third party intermediaries in place of their own field sales staff, also some providers have exclusive arrangements with third parties to act as external sales agents for them. In these cases, the third parties are identified and branded as being the provider. This is not problematic so long as it is fully transparent and that the client is fully aware of where their spend is going. To clarify, the client is ultimately paying for these services.

Therefore, the third party should provide additional value that the client cannot get themselves by going direct to the provider. In our opinion, Digren Energy does provide additional value and this is reflected in the savings delivered across your complete energy portfolio (not just procurement).













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