

STATUTORY INSTRUMENTS.

S.I. No. 341 of 2010

TAXES CONSOLIDATION ACT 1997 (ACCELERATED CAPITAL ALLOWANCES FOR ENERGY EFFICIENT EQUIPMENT) (AMENDMENT) (NO. 2) ORDER 2010

(Prn. A10/1009)

TAXES CONSOLIDATION ACT 1997 (ACCELERATED CAPITAL ALLOWANCES FOR ENERGY EFFICIENT EQUIPMENT) (AMENDMENT) (NO. 2) ORDER 2010

I, EAMON RYAN, Minister for Communications, Energy and Natural Resources, in exercise of the powers conferred on me by section 285A (inserted by section 46 of the Finance Act 2008 (No. 3 of 2008)) of the Taxes Consolidation Act 1997 (No. 39 of 1997), with the approval of, and after consultation with, the Minister for Finance, hereby order as follows:

1. (1) This Order may be cited as the Taxes Consolidation Act 1997 (Accelerated Capital Allowances for Energy Efficient Equipment) (Amendment) (No. 2) Order 2010.

(2) The collective citation, "the Taxes Consolidation Act 1997 (Accelerated Capital Allowances for Energy Efficient Equipment) Orders 2008, 2009 and 2010", includes this Order.

2. In this Order "Principal Order" means the Taxes Consolidation Act 1997 (Accelerated Capital Allowances for Energy Efficient Equipment) Order 2008 (S.I. No. 399 of 2008).

3. Schedule 1 of the Principal Order is amended by substituting the following for Part 1 of that Schedule:

"Part 1

Category: Motors and Drives

Technology: AC Induction Motors

An AC Induction Motor is an asynchronous electric motor that meets high efficiency standards. High efficiency AC induction motors are typically designed and constructed in such a manner as to reduce load losses (copper losses, rotor and stray load losses) and standing losses which are independent of the load (iron core and windage & friction losses). They can be considered either as standalone motors or as part of other equipment.

AC Induction Motor Eligibility Criteria:

In order to be included on the ACA Specified List, an AC induction motor must meet all of the requirements set out below.

Notice of the making of this Statutory Instrument was published in "Iris Oifigiúil" of 16th July, 2010. **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.	Must have a power rating of greater than or equal to 1.1 kW.
2.	Meet the efficiency requirements listed on Table 1. according to IEC 60034-2 "Rotating Electrical machines — Standard methods for determining losses and efficiency from tests", or scientific equivalent.
3.	All equipment and/or components must be CE-marked as required by the specific EU directive(s).
4.	Appropriate operating & maintenance manuals must be available to the end-user in order to optimise the achievement of any potential energy efficiency gains.

 Table 1 — Minimum Efficiency Criteria for Motors:

Power (kW)	2 Pole ¹ Efficiency % at Full load	4 Pole ² Efficiency % at Full load	Equivalent Classification
1.1	82.8	83.8	
1.5	84.1	85.0	
2.2	85.6	86.4	
3	86.7	87.4	
4	87.6	88.3	-
5.5	88.6	89.2	-
7.5	89.5	90.1	-
11	90.5	91.0	-
15	91.3	91.8	EFF1
18.5	91.8	92.2	
22	92.2	92.6	-
30	92.9	93.2	-
37	93.3	93.6	-
45	93.7	93.9	-
55	94.0	94.2	-
75	94.6	94.7	-
90	95.0	95.0	-
110	95.4	95.4	
132	95.6	95.6	IE3
160	95.8	95.8	-
200	96.0	96.0	-
370	96.0	96.0	1
400	96.0	96.0	1
> 400	96.0	96.0	See note 6

Notes:

- 1. Minimum efficiencies for 2 and 4 pole motors in the range 1.1kW to 90kW are equivalent to CEMEP EFF1 class. Motors in the range >90kW to 400 kW are as per the proposed IEC 60034-30 classification.
- 2. For motors with more than 4 poles, the minimum efficiency criteria for 4-pole motors above shall apply.
- 3. Motors must be tested in accordance with IEC 60034-2.
- 4. Where a particular motor size is not listed, the required minimum efficiency level for the next size up must be met.
- 5. IEC efficiency classification is currently in draft form. IE3 level is defined as Premium Efficiency
- 6. Testing for motors above 400 kW must be certified by a body qualified and approved to test to IEC 60034-2 classification or equivalent. There is currently no prescribed efficiency requirement which must be achieved for motors above 400 kW. However, the results of such certification must be to the reasonable satisfaction of Sustainable Energy Ireland. Sustainable Energy Ireland may have regard, in this respect, to the prescribed standards for smaller motors set out in Table 1, prevalent or proposed standards for motors of that type and size".

4. Schedule 1 of the Principal Order is amended by substituting the following for Part 2 of that Schedule:

"Part 2

Category: Motors and Drives

Technology: Variable Speed Drives

A Variable Speed Drive (VSD) is specifically designed to drive an electric motor in a manner that rotates the motor's drive shaft at a variable speed dictated by an external signal. Typically a Variable Speed Drive is a system that uses an external signal to control the rotational speed and torque of an electric motor by adjusting the frequency of the power supplied to the motor.

VSD Eligibility Criteria:

In order to be included on the ACA Specified list, a Variable Speed Drive must meet all of the requirements listed 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.	Must be specifically designed to drive an electric motor in a manner that rotates the motor's drive shaft at a variable speed dictated by an external signal.	
2.	While in operation, the output from the VSD shall be able to be automatically matched to the changing motor load.	
3.	Must be able use an appropriate external control signal to vary it's output frequency between 50% (or less) and 100% (or more) of the frequency of the alternating current supply with reference to real-time load conditions.	
4.	Functionality must be capable of being programmed by the user during the commissioning process without recourse to specialist equipment. In the event that specialist software is required it must be provided as part of the contract of sale.	
5.	Must comply with, and have been tested according to, IEC 61800-3 "Adjustable Speed Electrical Power Drive Systems Part 3: EMC Requirements and Specific Test Methods", or scientific equivalent.	
6.	Appropriate operating & maintenance manuals must be available to the end-user in order to optimise the achievement of any potential energy efficiency gains.	
7.	Training: For units above 15kW, appropriate training must be available to the end- user, such that the end user can run the system in an energy efficient manner.	

5. Schedule 1 of the Principal Order is amended by substituting the following for Part 6 of that Schedule:

"Part 6

Category: Information and Communications Technology (ICT)

Technology: Rack Mounted Servers

A Rack Mounted Server is a server computer which is designed to provide services and manage networked resources for client devices in a highly energy efficient manner. It is designed to function as a standalone server and is configured for installation in a central framework called a rack. Rack Mounted Servers typically contain amongst others such components as processors, integrated network controllers, memory, input/output (IO) ports, storage disks and power supplies.

Rack Mounted Server Eligibility Criteria:

In order to be included on the ACA Specified List, a Rack Mounted Server must meet all of the requirements set out below.

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

No.	Condition	
1.	Marketed and sold as an enterprise Rack Mounted Server.	
2.	Designed for, and listed as, supporting enterprise Server operating Systems and/or Hypervisors, and targeted to run user-installed enterprise applications.	
3.	Be capable of remote power-down.	
4.	Meet the relevant minimum performance to power ratios in Table 1.	
5.	Be supplied with a software management system which renders the server virtualisation capable.	

Table 1: Minimum server performance to power ratios

Server application	Minimum Ratio*
Performance at low utilisation of less than or equal to 30%.	> 700
Performance at moderate utilisation of greater than 30%, but less than 70%.	> 1650
Performance at high utilisation of greater than or equal to 70%.	> 2150

Note: Only the ratio calculation method detailed below can be used

*Performance to Power Ratio:

The ratio is based on the Standard Performance Evaluation Corporation (SPEC) industry standard benchmark performance test, SPECpower— ssj2008. Under this test the energy use of a server is tracked (plug power) while the server performs a defined sequence of operational tasks.

Calculation method — **Performance to power ratio:**

The metric required is calculated using the sum of outputs (Throughput per Watt of power) and power consumed at 10% utilisation intervals as shown overleaf:

- Performance to power ratio measured at low utilisation = Σ ssj— ops(0%+10%+20%+30%) / Σ power (0%+10%+20%+30%)
- Performance to power ratio measured at moderate utilisation = Σ ssj— ops(40%+50%+60%) / Σ power (40%+50%+60%)
- Performance to power ratio measured at high utilisation = $\Sigma \text{ ssj}$ --- ops(70%+80%+90%+100%) / Σ power (70+80%+90%+100%)

Where:

- ssj— ops = Workload at the specified utilisation level.
- Power = Energy consumed in Watts at specified utilisation level".

6. Schedule 1 of the Principal Order is amended by substituting the following for Part 9 of that Schedule:

"Part 9

Category: Refrigeration and Cooling Systems

Technology: Chillers and Fluid Coolers

Chillers and Fluid Coolers are defined as equipment that is designed to cool liquids by means of a free-cooler or refrigeration system that is packaged within a single factory assembled unit. Such equipment can also have a reverse cycle function to heat liquids.

Chillers and Fluid Coolers equipment is considered to include the following:

Packaged Chillers

Packaged chillers generate chilled fluids that can be used to provide space cooling or process cooling. Reverse cycle packaged chillers are also able to heat fluids. Some air-cooled packaged chillers also incorporate free-cooling mechanisms that can be used to reduce the amount of electricity needed by the product to provide cooling at lower ambient temperatures. Package chillers cover the following types:

- 1. Air-cooled packaged chillers, which include:
 - a. Air-Cooled chillers that provide cooling only
 - b. Air-cooled, reverse cycle, packaged chillers that provide both heating and cooling
- 2. Water-cooled packaged chillers, which include:
 - a. Water-cooled chillers that provide cooling only
 - b. Water-cooled, reverse cycle, packaged chillers that provide both heating and cooling.

Forced-Air Fluid Coolers

Forced-Air Fluid Coolers are specifically designed to cool water or process liquid by means of a heat exchanger using ambient air. They can be used to reduce the load on refrigeration systems by transferring heat from the fluid by means of fan-induced air forced over a finned tube heat exchanger. They can be used (in suitable ambient conditions) as an alternative to or in parallel or series with Packaged Chillers as a free cooling system. Some forced-air fluid coolers can incorporate a total-loss water spray system to generate an adiabatic effect to increase cooling efficiency and performance.

Mechanical-Draught Cooling Towers

Forced and induced Mechanical-Draught Cooling Towers are wet evaporative systems which transfer heat from water-cooled Packaged Chillers or a process

by means of fan-induced air circulation over a wetter surface. They can be used (in suitable ambient conditions) as an alternative to or in parallel or series with Packaged Chillers as a free cooling system.

Eligibility Criteria Overview

In order to be included on the ACA Specified List, the specific Chiller and Fluid Cooler equipment must meet all of the relevant requirements set out below.

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

General Eligibility Criteria

(Applicable to all ICT Heat Rejection equipment)

No.	Condition		
1.	All equipment and/or components must be CE marked as required by the specific EU directive(s).		
2.	 Each system must include the following optimisation functions: Optimise operating parameters to match changes in load requirements Where applicable, be capable of communicating with other control and cooling equipment for the purposes of free cooling 		
3.	 All forced-air heat exchangers (i.e. air-cooled condensers for packaged chillers and forced-air fluid coolers) must: have a fin spacing of no less than 2mm have the facility for full coil cleaning from the air-outlet side where a protective coating (e.g. vinyl) option is offered have the performance values corrected for the de-rating effect of the protective coating. 		

Chiller Package — specific eligibility criteria

(To be met in addition to the general eligibility criteria)

No.	Condition	
4.	Meet the cooling performance criteria for the applicable Thermal Load Capacity, measured by the Energy Efficiency Ratio (EER) of the <u>unit</u> at 100% (full) load capacity, as indicated in Table 1. and the European Seasonal Energy Efficiency Ratio (ESEER), as indicated in Table 1.	
5.	 Air cooled EER values must be obtained according to the test procedure EN14511 and standard rating conditions EN14511-2 Table 10 "Standard rating conditions, Water", or scientific equivalent, as follows: Outdoor Unit — Water entering 12°C, leaving 7 °C Outdoor Unit — Air entering 35°C Dry Bulb 	
6.	 Water cooled EER values must be obtained according to the test procedure EN14511 and standard rating conditions EN14511-2 Table 8, or scientific equivalent, as follows: Outdoor Unit — Chilled Water Side — Water entering 12°C, leaving 7°C Outdoor Unit — Heat Rejection Side — Water entering 30°C, leaving 35 °C 	
7.	ESEER values must be according to the test procedure EN14511, or scientific equivalent, and the rating conditions as indicated in Table 2, to follow.	
8.	Where applicable, the heating COP values must be obtained according to the test procedure EN14511 and standard rating conditions — EN14511-2 Table 9, outdoor air, for air-cooled chillers and EN14511-2 Table 7, water, for water-cooled chillers.	

Forced-Air Fluid Coolers — specific Eligibility Criteria

(To be met in addition to the general eligibility criteria)

No.	Condition
9.	 Must incorporate: a heat exchanger designed to cool water or other process liquids. a fan which forces air over the heat exchanger. a series of control valves (or 'by-pass mechanism') that re-direct the water or other process liquid around the pre-cooler in response to a control signal. a controller that operates the by-pass mechanism and controls the fan at times when the ambient air temperature is higher than the water/process liquid inlet temperature.
10.	Must have a minimum energy efficiency rating (EER) that is greater than or equal to 2.90 across the range of operating conditions where it is designed to provide cooling. (where EER = net cooling capacity (kW) / effective power input (kW))

Mechanical Draught Cooling Towers — specific Eligibility Criteria

(To be met in addition to the general eligibility criteria)

No.	Condition
11.	Must incorporate a mechanism that continually wets the surface of the fill pack and must include a water pump and a water storage tank.

Table 1: Minimum cooling performance values

Туре	Thermal Load Capacity (kW)	EER	ESEER
Air-Cooled Chiller Package	100 to 1500	≥2.7	≥4.25
Water-Cooled Chiller Package	100 to 3500	≥4.65	≥6.55

Notes:

Energy Efficiency Ratio (EER) is calculated as follows:

EER = Net rejection capacity (kW) / Effective power input (kW) in cooling mode

European Seasonal Energy Efficiency Ratio (ESEER) is calculated as follows:

ESEER = A*EER100% + B*EER75% + C*EER50% + D*EER25%

With the following weighting coefficients: A = 0.03; B = 0.33; C = 0.41; D = 0.23

Table 2: ESEER test conditions

Part Load Ratio	Air temperature (°C)	Water temperature (°C)	Weighting coefficients
100	35	30	3 %
75	30	26	33 %
50	25	22	41 %
25	20	18	23 %
	•		"

7. Schedule 1 of the Principal Order is amended by substituting the following for Part 14 of that Schedule:

"Part 14

Category: Heating and Electricity Provision

Technology: Wind Turbine Systems

A Wind Turbine System is defined as advanced equipment which converts the wind's kinetic energy into rotary mechanical energy, which is then used for electricity generation primarily for on-site use. It typically consists of the turbine, supporting structure, electrical management and/or control systems and energy storage systems

Wind Turbine Systems are considered to include the following:

Wind turbine

A wind turbine typically consists of the turbine and supporting structure, the primary element of the wind turbine system, but may also include control and energy storage systems.

Inverters

An inverter for a wind turbine system is an electrical device that is used to convert a wind turbine's electrical output to one that is compatible for connection to the grid or a site's mains electrical supply.

Wind Turbine System Eligibility Criteria:

In order to be included on the ACA Specified list, a Wind Turbine System must meet all of the relevant requirements listed below.

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

General Eligibility Criteria

(Applicable to all wind turbine system equipment)

No.	Condition
1.	All equipment and/or components must be CE marked as required by the specific EU directive(s).

Wind Turbine — Specific Eligibility Criteria

(To be met in addition to the general eligibility criteria)

No.	Condition	
2.	Must have a rating of greater than 5kW	
3.	The wind turbine must comply with, and have been tested according to, the appropriate European standard(s), or scientific equivalent, applicable to its size and type.	
4.	Appropriate operating and maintenance manuals must be available for the end-user as part of the main contract of sale in order to optimise the achievement of any potential efficiency improvements.	

Inverter — Specific Eligibility Criteria

(To be met in addition to the general eligibility criteria)

No.	Condition
5.	Must be at least 90% efficient and comply with the appropriate European standard(s), or scientific equivalent, applicable to the connection interface type.

8. Schedule 1 of the Principal Order is amended by substituting the following for Part 15 of that Schedule:

"Part 15

Category: Heating and Electricity Provision

Technology: Boiler and Water Heaters

Boilers and Water Heaters are defined as advanced equipment which provides heating and/or hot water primarily for on-site use.

Hot Water Generation equipment is considered to include the following:

Instantaneous gas fired water heaters

Instantaneous gas fired water heaters combust fuel to provide hot water on demand, whereby the water used is heated directly by the unit. They also have the facility to recover heat from the flue gases to maximise the heat output.

Boilers

Boilers combust fuel to provide heating through a closed loop hot water system delivery medium. Such boilers can also indirectly heat water for on-site use. The equipment consists of the boiler and/or burner.

Eligibility Criteria Overview

In order to be included on the ACA Specified List, the specific boiler and hot water heater equipment must meet all of the relevant requirements set out below.

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

General Eligibility Criteria

(Applicable to all boiler and hot water heater equipment)

No.	Condition	
1.	Condensing only.	
2.	All equipment and/or components must be CE marked as required by the specific EU directive(s).	

Hot Water Heater — specific Eligibility Criteria

(To be met in addition to the general eligibility criteria)

No.	Condition
3.	 Net Thermal Efficiency tested at full load: Storage & non-storage instantaneous types must be ≥ 102% Non storage circulator types must be ≥ 93%
4.	 Gas condensing water heaters must comply with all the requirements in the standard EN 89 "Gas-fired storage water heaters for the production of domestic hot water", or scientific equivalent. Gas condensing water heaters with atmospheric burners must comply with EN 26/A1 "Gas-fired instantaneous water heaters for sanitary uses production, fitted with atmospheric burners (Including Corrigendum 1998)", or scientific equivalent.
5.	Modulating output — non-storage types must have the capability to vary their hot water output in response to changes in water demand, without initiating a purge cycle.
6.	Balanced flue on units with a rated output less than 70kW.

Boiler — specific Eligibility Criteria

(To be met in addition to the general eligibility criteria)

No.	Condition
7.	Boilers <70kW rated output Seasonal Thermal Efficiency must be ≥ 93% (To be calculated according to S.I. No. 260/1994 as used in the Home-heating Appliance Register of Performance (HARP) database) or Boilers >70kW rated output Net Thermal Efficiency ≥ 93% (To be calculated as per — UK DTI Efficiency Requirements for Hot-water Boilers, Oct 1995)

No.	Condition	
8.	 Must be tested in accordance with BS 845: Part 1 'Methods for assessing thermal performance of boilers for steam, hot water and high temperature heat transfer fluids — Part 1 Concise Procedure', or scientific equivalent. and Oil boilers must be tested in accordance with EN 304 "Heating boilers — Test code for heating boiler for atomising oil burners", or scientific equivalent. Oil & gas shell boilers must comply with the acceptance tests set out in EN 12953-11 "Shell Boilers — Part 11: Acceptance tests", or scientific equivalent. Oil & gas water tube boilers must comply with the acceptance tests set out in EN 12952-15 "Water-tube boilers and auxiliary installations. Acceptance tests", or scientific equivalent. Combination boilers must also comply with "EN 625-Gas-fired central heating boilers — Specific requirements for the domestic hot water operation of combination boilers of nominal heat input not exceeding 70 kW", or scientific equivalent. 	
9.	 Incorporated burners must have microprocessor based controls that are capable of continuously modulating burner output in response to measured temperature or pressure values over a turn-down ratio as appropriate below: Gas (≥ 1,200kW): ≥4 to 1 Oil (≥ 1,200kW): ≥2.5 to 1 Gas or dual fuel (<1,200kW): ≥3 to 1 Oil (< 1,200kW): ≥2 to 1 Note: Turn-down ratio is a measure of the range within which the burner can be adjusted. Turn down of 4 to 1 indicates adjustment in the range 25% to 100%. 	
10.	Standing losses — 2% or less of boiler rated output.	

9. Schedule 1 of the Principal Order is amended by substituting the following for Part 18 of that Schedule:

"Part 18

Category: Heating and Electricity Provision

Technology: Photovoltaic Systems

A Photovoltaic (PV) System is defined as advanced equipment which efficiently converts solar energy into electrical energy primarily for on-site use. It typically consists of a photovoltaic module, supporting structure, electrical management systems, control systems and energy storage systems

Photovoltaic Systems are considered to include the following:

Photovoltaic module

A photovoltaic module typically consists of the module and supporting structure, the primary element of the photovoltaic system, but may also include control systems (e.g. tracking mechanism and solar concentrator) and energy storage systems.

Inverters

An inverter for a photovoltaic system is an electrical device that is used to convert a photovoltaic's electrical output to one that is compatible for connection to the grid or a site's mains electrical supply.

Photovoltaic System Eligibility Criteria

In order to be included on the ACA Specified List, a Photovoltaic System must meet all of the relevant 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.

General Eligibility Criteria

(Applicable to all photovoltaic system equipment)

No.	Condition
1.	All equipment and/or components must be CE marked as required by the specific EU directive(s).

Photovoltaic module — Specific Eligibility Criteria

(To be met in addition to the general eligibility criteria)

No.	Condition
2.	Photovoltaic modules must comply with the relevant standards (design qualification and type approval), or scientific equivalent, and outputs specified in Table 1. (Photovoltaic module output per m ² must be quoted in terms of Standard Test Conditions: Irradiance of 1000W/m ² ; spectrum AM 1.5G; cell temperature 25 ^o C)
3.	Appropriate operating and maintenance manuals must be available for the end-user as part of the main contract of sale in order to optimise the achievement of any potential efficiency improvements.

Inverter — Specific Eligibility Criteria

(To be met in addition to the general eligibility criteria)

No.	Condition
4.	Must be at least 90% efficient and comply with the appropriate European standard(s), or scientific equivalent, applicable to the connection interface type.

Table 1 — Minimum photovoltaic module outputs

Туре	Standard	Minimum Peak Watt (W _p) output per m ²
Crystalline silicon	EN 61215	110
Thin-film	EN 61646	30

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10. Schedule 1 of the Principal Order is amended by substituting the following for Part 23 of that Schedule:

"Part 23

Category: Process and Heating, Ventilation and Air-conditioning (HVAC) Control Systems

Technology: Heat Exchangers

Heat Exchangers are equipment which is specifically designed to allow the efficient transfer of energy from one liquid or gas stream to another, in both heating and cooling applications.

Heat Exchanger equipment is considered to include the following:

Run-around Coil heat exchangers

A Run-around Coil heat exchanger transfers energy from an exhaust air stream to a supply air stream via an energy transfer medium circuit (usually water) connecting the two energy streams.

Liquid-to-liquid Plate heat exchangers

Liquid-to-liquid plate heat exchangers comprise of a series of formed plates through which liquid streams are channeled in alternate flows. Energy is transferred between an exhaust and supply liquid stream via the exchangers and an energy transfer circuit.

Air-to-air Plate heat exchangers

Air-to-air plate heat exchangers comprise of a series of formed plates through which air streams are channeled in alternate flows. Energy is transferred between an exhaust and supply airstream via the exchangers and an energy transfer circuit.

Thermal Wheel heat exchangers

Thermal wheel heat exchangers are installed where the exhaust air stream is directly adjacent to the supply air stream. The wheel rotates slowly on an axis perpendicular to air flow. The rotation of the wheel transfers energy between the two streams.

Eligibility Criteria Overview

In order to be included on the ACA specified list, the specific heat exchanger equipment must satisfy all of the relevant 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.

General Heat Exchanger Eligibility Criteria

(Applicable to all heat exchanger equipment)

No.	Condition
1.	All equipment and/or components must be CE marked as required by the specific EU directive(s).
2.	 All required performance values must be tested according to: EN305 "Heat exchangers. Definitions of performance of heat exchangers and the general test procedure for establishing performance of all heat exchangers" EN 306 "Heat exchangers. Methods of measuring the parameters necessary for establishing the performance" ,or scientific equivalent.

Run-around heat exchangers — specific Eligibility Criteria

(To be met in addition to the general eligibility criteria)

No.	Condition
3.	A heat transfer efficiency greater than or equal to 50% during maximum capacity operation
4.	A maximum air side pressure drop across an individual heat exchanger coil of 100 Pa.
5.	A maximum water side pressure drop across an individual heat exchanger coil of 25 kPa

Liquid-to-liquid Plate Heat exchangers — specific Eligibility Criteria

(To be met in addition to the general eligibility criteria)

No.	Condition
6.	A ratio of internal heat exchanging surface area to maximum operating volume greater than 200. $(m^2/m^3 > 200)$.
7.	A heat transfer efficiency greater than or equal to 85% during maximum capacity operation.

Air-to-air Plate Heat exchangers — specific Eligibility Criteria

(To be met in addition to the general eligibility criteria)

No.	Condition
8.	A heat transfer efficiency greater than or equal to 50% during maximum capacity operation.
9.	A maximum pressure drop across the heat exchanger of 250 Pa

Thermal Wheel heat exchangers — specific Eligibility Criteria

(To be met in addition to the general eligibility criteria)

No.	Condition
10.	A heat transfer efficiency greater than or equal to 70% during maximum capacity operation
11.	A maximum pressure drop across the heat exchanger component of 200 Pa.

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11. Part 2 of Schedule 2 of the Principal Order is amended by inserting the following:

Aca Code	Product Code	Product Name	Short Description	Manufacturer
VSD31443	132F0001	VLT Micro Drive FC-051 (0.18 kW 1- Phase)Single-phase Gener Purpose Variable 		Danfoss
VSD31444	132F0002	VLT Micro Drive FC-051 (0.37 kW 1- Phase) Speed Drive		Danfoss
VSD31445	132F0003	VLT Micro Drive FC-051 (0.75 kW 1- Phase)	Single-phase General Purpose Variable Speed Drive	Danfoss
VSD31446	132F0005	VLT Micro Drive FC-051 (1.5 kW 1- Phase)	Single-phase General Purpose Variable Speed Drive	Danfoss
VSD31447	132F0007	VLT Micro Drive FC-051 (2.2 kW 1- Phase)	Single-phase General Purpose Variable Speed Drive	Danfoss
VSD31448	132F0017	VLT Micro Drive FC-051 (0.37 kW 3- Phase)	3-Phase General Purpose Variable Speed Drive	Danfoss
VSD31449	132F0018	8 VLT Micro Drive FC-051 (0.75 kW 3- Phase) Speed Drive		Danfoss
VSD31450	132F0020	V20VLT Micro Drive FC-051 (1.5 kW 3- Phase)3-Phase General Purpose Variable Speed Drive		Danfoss
VSD31451	132F0022	022 VLT Micro Drive FC-051 (2.2 kW 3- Phase) 3-Phase General Purpose Variable Speed Drive		Danfoss
VSD31452	52 132F0024 VLT Micro Drive FC-051 (3.0 kW 3- Phase) Speed Drive		Danfoss	
VSD31453	132F0026	VLT Micro Drive FC-051 (4.0 kW 3- Phase)	3-Phase General Purpose Variable Speed Drive	Danfoss
VSD31454	VSD31454 132F0028 VLT Micro Drive FC-051 (5.5 kW 3- Purpose Variable			Danfoss
VSD31455	1455 132F0030 VLT Micro Drive 3-Pha FC-051 (7.5 kW 3- Purpo		3-Phase General Purpose Variable Speed Drive	Danfoss
VSD31456	132F0058	VLT Micro Drive FC-051 (11 kW 3- Phase)	3-Phase General Purpose Variable Speed Drive	Danfoss
VSD31457	132F0059	VLT Micro Drive FC-051 (15 kW 3- Phase)	2-051 (15 kW 3- Purpose Variable	
VSD31458	132F0060	VLT Micro Drive FC-051 (18.5 kW 3- Phase)	3-Phase General Purpose Variable Speed Drive	Danfoss

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Aca Code	Product Code	Product Name	Short Description	Manufacturer
VSD31459	132F0061	VLT Micro Drive FC-051 (22 kW 3- Phase)	3-Phase General Purpose Variable Speed Drive	Danfoss

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12. Part 3 of Schedule 2 of the Principal Order is amended by inserting the following:

Aca Code	Product Code	Product Name	Short Description	Manufacturer
LIG31543	IG4658.35	iGuzzini Pixel Plus Pixel 4658 35w Round metal Halide recessed adjustable luminaire 35w spot optic		iGuzzini
LIG31544	IG4658.70	iGuzzini Pixel Plus Pixel 4658 70w	Round metal Halide recessed adjustable luminaire 70w spot optic	iGuzzini
LIG31545	IG4658.150	iGuzzini Pixel Plus Pixel 4658 150w	Round metal Halide recessed adjustable luminaire 150w spot optic	iGuzzini
LIG31546	IGM185.35	iGuzzini Pixel Plus Pixel M185 35w	Round metal Halide recessed adjustable luminaire 35w spot optic	iGuzzini
LIG31547	IGM185.70	iGuzzini Pixel Plus Pixel M185 70w	Round metal Halide recessed adjustable luminaire 70w spot optic	iGuzzini
LIG31548	IGM186.35	iGuzzini Pixel Plus Pixel M186 35w	Round metal Halide recessed adjustable luminaire 35w flood optic	iGuzzini
LIG31549	IGM186.70	iGuzzini Pixel Plus Pixel M186 70w	Round metal Halide recessed adjustable luminaire 70w flood optic	iGuzzini
LIG31550	IGM187.35	iGuzzini Pixel Plus Pixel M187 35w	Round metal Halide recessed adjustable luminaire 35w flood optic	iGuzzini
LIG31551	IGM187.70	iGuzzini Pixel Plus Pixel M187 70w	Metal Halide recessed adjustable luminaire 70w flood optic	iGuzzini
LIG31552	IGM188.35	iGuzzini Frame Discharge M188 35w.	Round Metal Halide recessed adjustable luminaire 35w spot optic c/w 1 optical assembly	iGuzzini

Aca Code	Product Product Name		Short Description	Manufacturer
LIG31553	Code IGM188.70	iGuzzini Frame	Round Metal Halide	iGuzzini
		Discharge M188 70w. recessed adjustable luminaire 70w spot optic c/w 1 optical assembly		
LIG31554	IGM189.35	iGuzzini Frame Discharge M189 35w.	Round Metal Halide recessed adjustable luminaire 35w flood optic c/w 1 optical assembly	iGuzzini
LIG31555	IGM189.70	iGuzzini Frame Discharge M189 70w.	Round Metal Halide recessed adjustable luminaire 70w flood optic c/w 1 optical assembly	iGuzzini
LIG31556	IGM190.35	iGuzzini Frame Discharge M190 35w.	Square Metal Halide recessed adjustable luminaire 35w spot optic c/w 1 optical assembly	iGuzzini
LIG31557	IGM190.70	iGuzzini Frame Discharge M190 70w.	Square Metal Halide recessed adjustable luminaire 70w spot optic c/w 1 optical assembly	iGuzzini
LIG31558	IGM191.35	iGuzzini Frame Discharge M191 35w.	Square Metal Halide recessed adjustable luminaire 35w flood optic c/w 1 optical assembly	iGuzzini
LIG31559	IGM191.70	iGuzzini Frame Discharge M191 70w.	Square Metal Halide recessed adjustable luminaire 70w flood optic c/w 1 optical assembly	iGuzzini
LIG31560	IGM206.35	iGuzzini Deep Minimal M206 35w.	Square Metal Halide recessed adjustable luminaire 35w spot optic c/w 1 optical assembly	iGuzzini
LIG31561	G31561 IGM206.70 iGuzzini Deep Minimal M206 70w.		Square Metal Halide recessed adjustable luminaire 70w spot optic c/w 1 optical assembly	iGuzzini
LIG31562	IGM207.35	iGuzzini Deep Minimal M207 35w.	Square Metal Halide recessed adjustable luminaire 35w flood optic c/w 1 optical assembly	iGuzzini
LIG31563	IGM207.70	iGuzzini Deep Minimal M207 70w.	Square Metal Halide recessed adjustable luminaire 70w flood optic c/w 1 optical assembly	iGuzzini
LIG31564	IG6757.70	iGuzzini Rib 6757 70w	Small body high bay suspension luminaire with aluminium reflector 70w Metal Halide	iGuzzini

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Aca Code	Product Code	Product Name	Short Description	Manufacturer
LIG31565	IG6758.150	iGuzzini Rib 6758 150		
LIG31566	IGM220.35	iGuzzini Lumen M220 35w	Mains voltage large body 35w Metal Halide spot optic spotlight c/w electronic control gear	iGuzzini
LIG31567	IGM221.35	iGuzzini Lumen M221 35w	Mains voltage large body 35w Metal Halide flood optic spotlight c/w electronic control gear	iGuzzini
LIG31568	IG6387.70	iGuzzini Lumen 6387 70w	Mains voltage large body 70w Metal Halide spot optic spotlight c/w electronic control gear	iGuzzini
LIG31569	IGM223.70	iGuzzini Lumen M223 70w	Mains voltage large body 70w Metal Halide flood optic spotlight c/w electronic control gear	iGuzzini
LIG31570	IG3936.150	iGuzzini Sistema Easy MH-HAL 3936 150w	Square professional recessed luminaire 150 Metal Halide flood optic	iGuzzini
LIG31571	IGM216.35	iGuzzini Metro M216 35w	Mains voltage spotlight 35w Metal Halide spot optic c/w electronic control gear	iGuzzini
LIG31572	IGM217.35			iGuzzini
LIG31573	IGM218.70	iGuzzini Metro M218 70w	Mains voltage spotlight 70w Metal Halide spot optic c/w electronic control gear	iGuzzini
LIG31574	IGM219.70	iGuzzini Metro M219 70w	Mains voltage spotlight 70w Metal Halide flood optic c/w electronic control gear	iGuzzini
LIG31575	IG6279.214	iGuzzini Sistema Easy FL 6279 2x14w	Square professional recessed luminaire 2x14w PLR c/w electronic control gear	iGuzzini

Aca Code Product Code		Product Name	Short Description	Manufacturer
LIG31576	IG6279.217	iGuzzini Sistema Easy FL 6279 2x17w Easy FL 6270 2x		iGuzzini
LIG31577	IG3869.32	iGuzzini Sistema Easy FL 3869 32w	Square professional recessed luminaire 32w Compact Flourscent c/w electronic control gear	iGuzzini
LIG31578	IG3304.226	iGuzzini Sistema Easy FL 3304 2x26w	Round professional recessed luminaire 2x26w Compact Flourscent c/w electronic control gear	iGuzzini
LIG31579	IG3305.32			iGuzzini
LIG31580	IG3347.32	iGuzzini Sistema Easy FL 3347 32w	Round professional recessed luminaire 32w Compact Flourscent c/w DALI control gear	iGuzzini
LIG31581	IG3595.42	iGuzzini Sistema Easy FL 3595 42w	Round professional recessed luminaire 42w Compact Flourscent c/w electronic control gear	iGuzzini
LIG31582	IG6276.214	iGuzzini Sistema Easy FL 6276 2x14w	Round professional recessed luminaire 2x14w PLR c/w electronic control gear	iGuzzini
LIG31583	IG6276.217 iGuzzini Sistema Easy FL 6276 2x17w		Round professional recessed luminaire 2x17w PLR c/w electronic control gear	iGuzzini
LIG31491	3f-128	3f Filippi	1x28 corrosion proof 4ft	3F filippi
LIG31492	3f-228	3f filippi	2x28w T5,corrosion proof	3F Filippi S.p.A.
LIG31494	22.Relax T5 PAR- V2 MIR04 A1 L1 4x14	22Relax	Recessed luminaire 600x600mm	OMS spol. s.r.o
LIG31495	24.Relax T5 PAR- V2 MIR04 A2 L1 3x14	24Relax	Recessed luminaire 1200x200mm	OMS spol. s.r.o

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Aca Code	Product Code	Product Name	Short Description	Manufacturer
LIG29350	5711	3F Linda Inox 2x35 T5 HF—	Fluorescent polycarbonate luminaire IP65	3F Filippi S.p.A.
LIG29351	5712	3F Linda Inox 2x49 T5 HF	Fluorescent polycarbonate luminaire IP65	3F Filippi S.p.A.
LIG29352	5769	3F Linda Inox 1x35 T5 HF	Fluorescent polycarbonate luminaire IP65	3F Filippi S.p.A.
LIG29353	5772	3F Linda Inox 2x35 T5 HF	Fluorescent polycarbonate luminaire IP65	3F Filippi S.p.A.
LIG29354	5705	3F Linda Inox 1x49 T5 HF	Fluorescent polycarbonate luminaire IP65	3F Filippi S.p.A.
LIG30380	70416598	70416598	Tecton 1/49W T16 WH — Reflector: Tecton RGL 35/49/80W WH	Zumtobel Lighting
LIG30381	70416598E	70416598E	Tecton 1/49W T16 WH — Reflector: Tecton RGL 35/49/80W WH: With Emergency	Zumtobel Lighting
LIG30382	70416599	70416599	Tecton 2/49W T16 WH — Reflector: Tecton RGL 35/49/80W WH	Zumtobel Lighting
LIG30383	70416599E	70416599E	Tecton 2/49W T16 WH — Reflector: Tecton RGL 35/49/80W WH: With Emergency	Zumtobel Lighting
LIG30384	70416600	70416600	Tecton 1/24W T16 WH: — Reflector: Tecton RGL 14/24W WH	Zumtobel Lighting
LIG30793	5LD17771J UM02192	Avion Continuous (A)	1x54w T16 Dir/Ind BAP65 HFG Suspended Avion	Siteco Limited
LIG31202	Alto 500 N13	Alto 500 Range	Alto 500 is a Linear LED Fixture suitable for horizontal merchandising cases in frozen, chilled & ambient environments. It has been designed to be OEM factory fitted or retrofitted on site.	Nualight
LIG31793	900380C31 4HF	900 Series	3x14w T5 modular	Astra Technical Lighting

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13. Part 4 of Schedule 2 of the Principal Order is amended by inserting the following:

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Aca Code	Product Code	Product Name	Short Description	Manufacturer
LCO29342	Flex 7	Flex 7 System	Presence & Daylight Sensors and Controllers	Flex Connectors Ltd
LCO30306	DIN-INT-CI-08	eDIN input/output module	An eight channel adaptable input/output which can be configured to accept 0-10v, DSI or switched contact as inputs or provide 0-10v, DSI or DMX outputs	Mode Lighting Ltd.
LCO31510	OL35-A10300- 380	LEC	Lighting Energy Controller	Power Electronics Systems

14. Part 5 of Schedule 2 of the Principal Order is amended by inserting the following:

Aca Code	Product Code	Product Name	Short Description	Manufacturer
BEM31181	G2 — 800902 G3T — 800906	Multilog Data Collector	The Multilog loggers collect and store HH kWh data from gas, electricity & water pulse output meters the Controller Software extracts the data allowing energy usage to be monitored and controlled.	Megacon AB
BEM31475	Vertoda	The Vertoda Framework	Vertoda is an open source software framework that captures and secures smart meter and wireless sensor data.	Vertoda

15. Part 6 of Schedule 2 of the Principal Order is amended by inserting the following:

Aca Code	Product Code	Product Name	Short Description	Manufacturer
ESE31535	R610 X5670	PowerEdge R610 X5670	12 Dimms, 6x2.5" HP HDDs, 2 PCI, 4 LOM, HP RPS, rdnt Cooling, iDRAC6- Express. Intel X5670 processor	Dell
ESE31536	R710 X5670	PowerEdge R710 X5670	18 Dimms, 6x3.5" or 8x2.5" HP HDDs, 4 PCI (x16 support), 4 LOM, HP RPS, HP rdnt cooling, iDRAC6- Express, Intel X5670 processor	Dell
ESE31537	R815 AMD6714	PowerEdge R815 AMD6714	4S socket, 2U AMD server 32 DIMMs, 6 HDDs, 4 LOM, 6 PCIe + 1 storage, AMD 6714 processor	Dell
ESE31538	R910 X7560	PowerEdge R910 X7560	4S, 4U Rack, 64 DIMMS, 16 HDDs, 10 PCI, 4 LOMS (2 x 10GB), Intel X7560 processor	Dell
ESE31664	DL385 G7 6174	DL385 G7 6174	ProLiant DL385 G7 (2.2GHz, AMD Opteron 6174) Rack Server	Hewlett-Packard Ireland Ltd
ESE31665	DL170h G6 5530	DL170h G6 5530	ProLiant DL170h G6 (2.4 GHz, Intel Xeon L5530) Rack Server	Hewlett-Packard Ireland Ltd
ESE31666	SL2x170z G6 5530	SL2x170z G6 5530	ProLiant SL2x170z G6 (2.4 GHz, Intel Xeon L5530) Rack Server	Hewlett-Packard Ireland Ltd
ESE31667	DL360 G6 5530	DL360 G6 5530	ProLiant DL360 G6 (2.40GHz, Intel Xeon L5530 processor) Rack Server	Hewlett-Packard Ireland Ltd

16. Part 7 of Schedule 2 of the Principal Order is amended by inserting the following:

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Aca Code	Product Code	Product Name	Short Description	Manufacturer
EST31436	NS-960	EMC Celerra NS-960	EMC Celerra NS-120 Unified Storage	EMC INFORMATION SYSTEMS INTERNATIONAL
EST31437	NS-480	EMC Celerra NS-480 Unified Storage	EMC Celerra NS-480 Unified Storage	EMC INFORMATION SYSTEMS INTERNATIONAL
EST31438	NS-120	EMC Celerra NS-120	EMC Celerra NS-120 Unified Storage	EMC INFORMATION SYSTEMS INTERNATIONAL
EST31439	NX4	EMC Celerra NX4	EMC Celerra NX4 Unified Storage	EMC INFORMATION SYSTEMS INTERNATIONAL

17. Part 10 of Schedule 2 of the Principal Order is amended by inserting the following:

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Aca Code	Product Code	Product Name	Short Description	Manufacturer
CDC25193	FMP20e.48G	Hybrid Power DC System	On or Off grid AC harnessed with deep cyclic batteries, together with Solar and/or Wind energy inputs for reliable energy supply	Power-One

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18. Part 11 of Schedule 2 of the Principal Order is amended by inserting the following:

Aca Code	Product Code	Product Name	Short Description	Manufacturer
PMA31979	PM3004V-401	Avocent Power Management Distibution Units PM3004- 401	Avocent PM 3000 PDU 0U Vertical 3-ph 16A 380/400/415v with IEC 309 16A, 21 C13 & 3 C19 ports	Avocent International
PMA31980	PM3005-406	Avocent Power Management Distibution Units PM3005- 406	Avocent PM 3000 PDU 0U Vertical 3-ph 32A 380/400/415V with IEC 309 32A, 21 C13 & 3 C19 ports	Avocent International
PMA31981	PM3011V-401	Avocent PM 3000 PDU 0U Vertical 1-ph 32A 220/230/240V with IEC 309, 20 C13 ports PM3011V-401	Avocent PM 3000 PDU 0U Vertical 1-ph 32A 220/230/240V with IEC 309, 20 C13 ports	Avocent International
PMA31983	PM3003H-401	Avocent PM 3000 PDU 1U Horizontal 1-ph 32A 220/230/240V, fixed cord with IEC 309 32A, 3 C19 ports PM3003H-401	Avocent PM 3000 PDU 1U Horizontal 1-ph 32A 220/230/240V, fixed cord with IEC 309 32A, 3 C19 ports	Avocent International
PMA31984	PM3005H-406	Avocent PM 3000 PDU 1U Horizontal 3-ph 32A 380/400/415V with IEC 309 32A, 6 C19 ports PM3005H-406	Avocent PM 3000 PDU 1U Horizontal 3-ph 32A 380/400/415V with IEC 309 32A, 6 C19 ports	Avocent International
PMA31985	PM3008H-401	Avocent PM 3000 PDU 1U Horizontal 1-ph 32A 220/230/240V with IEC 309, 10 C13 ports PM3008H-401	Avocent PM 3000 PDU 1U Horizontal 1-ph 32A 220/230/240V with IEC 309, 10 C13 ports	Avocent International

19. Part 13 of Schedule 2 of the Principal Order is amended by inserting the following:

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Aca Code	Product Code	Product Name	Short Description	Manufacturer
CGE31662	NG315K	PSE NG315K CHP	Packaged Cogeneration unit with 315 kWe output	Cummins Power

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20. Part 18 of Schedule 2 of the Principal Order is amended by inserting the following:

Aca Code	Product Code	Product Name	Short Description	Manufacturer
PSY31182	PV-Module SCHOTT ASI 95, 95 Wp	SCHOTT ASI 95	thin film PV panel	SCHOTT Solar AG
PSY31183	PV Module SCHOTT ASI 97, 97Wp	SCHOTT ASI 97	thin film PV panel	SCHOTT Solar AG
PSY31184	PV Module SCHOTT ASI 103, 103Wp	SCHOTT ASI 103	thin film PV panel	SCHOTT Solar AG
PSY31185	PV Module SCHOTT POLY 170, 170Wp	SCHOTT POLY 170	Crystalline silicone PV panel	SCHOTT Solar AG
PSY31186	PV Module SCHOTT POLY 175, 175Wp	SCHOTT POLY 175	Crystalline silicone PV module	SCHOTT Solar AG
PSY31187	PV Module SCHOTT POLY 180, 180Wp	SCHOTT POLY 180	Crystalline silicone PV panel	SCHOTT Solar AG
PSY31188	PV Module SCHOTT POLY 220, 220Wp	SCHOTT POLY 220	Crystalline silicone PV panel	SCHOTT Solar AG
PSY31189	PV Module SCHOTT POLY 230, 230Wp	SCHOTT POLY 230	Crystalline silicone PV panel	SCHOTT Solar AG
PSY31190	PV Module SCHOTT POLY 290, 290Wp	SCHOTT POLY 290	Crystalline Silicone PV panel	SCHOTT Solar AG
PSY31191	PV Module Sovello SV-7- 180, 180Wp	SOVELLO SV- T-180	Crystalline silicone PV panel	Sovello
PSY31192	PV Module Sovello SV-T- 185, 185Wp	SOVELLO SV- T-185	Crystalline silicone PV panel	Sovello

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Aca Code	Product Code	Product Name	Short Description	Manufacturer
PSY31193	PV Module Sovello SV-T- 190, 190Wp	SOVELLO SV- T-190	Crystalline silicone PV panel	Sovello
PSY31194	PV Module Sovello SV-X- 195, 195Wp	SOVELLO SV- X-195	Crystalline silicone PV panel	Sovello
PSY31195	PV Module Sovello SV-X- 200, 200Wp	SOVELLO SV- X-200	Crystalline silicone PV panel	Sovello
PSY31196	PV Module Sovello SV-X- 205, 205Wp	SOVELLO SV- X-205	Crystalline silicone PV panel	Sovello
PSY31746	NU-185 (E1)	NU-185 (E1)	185 Watt Monocrystalline Silicon Photovoltaic Module	Sharp
PSY31747	NU-S5 (E3E)	NU-85 (E3E)	185 Watt Monocrystalline Photovoltaic Panel	Sharp
PSY31748	NU-180 (E1)	NU-180 (E1)	180 Watt Monocrystalline Photovoltaic Panel	Sharp
PSY31749	NU-S0 (E3E)	NU-S0 (E3E)	180 Watt Monocrystalline Photovoltaic Panel	Sharp
PSY31750	NU-E235 (E1)	NU-E235 (E1)	235 Watt Monocrystalline Photovoltaic Panel	Sharp
PSY31751	ND-170 (E1F)	ND-170 (E1F)	170 Watt Multicrystalline Photovoltaic Panel	Sharp
PSY31752	ND-175 (E1F)	ND-175 (E1F)	175 Watt Multicrystalline Photovoltaic Panel	Sharp
PSY31753	ND-220 (E1F)	ND-220 (E1F)	220 Watt Multicrystalline Photovoltaic Panel	Sharp
PSY31754	ND-210 (E1F)	ND-210 (E1F)	210 Watt Multicrystalline Photovoltaic Panel	Sharp
PSY31755	NA-F135 (G5)	NA-F135 (G5)	135 Watt Thin Film Photovotlaic Panel	Sharp
PSY31756	NA-F128 (G5)	NA-F128 (G5)	128 Watt Thin Film Photovotlaic Panel	Sharp

Aca Code	Product Code	Product Name	Short Description	Manufacturer
PSY31757	NA-F121 (G5)	NA-F121 (G5)	121 Watt Thin Film Photovotlaic Panel	Sharp

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The Minister for Finance approves the making of the foregoing Order.



GIVEN under my Official Seal, 12 July 2010.

> BRIAN LENIHAN, Minister for Finance.



GIVEN under my Official Seal, 12 July 2010.

> EAMON RYAN, Minister for Communications, Energy and Natural Resources.

EXPLANATORY NOTE

(This note is not part of the Instrument and does not purport to be a legal interpretation)

The effect of this Order is to update, in accordance with the provisions of section 285A of the Taxes Consolidation Act 1997 (inserted by section 46 of the Finance Act 2008), those energy efficient products whose capital cost will be eligible for accelerated capital allowances and to update the energy efficiency criteria used to determine eligibility for inclusion on those product lists.

The Accelerated Capital Allowance Scheme will involve quarterly updates to those product lists.

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