

DESIGN STANDARDS & CERTIFICATION FOR NON-DOMESTIC MEASURES



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Abbreviations:
NSAI- National Standards Authority
TGD- Technical Guidance Documents
ETCI- Electro-Technical Council of Ireland
CIBSE- Chartered Institution of Building Services Engineers
ESB - Electricity Supply Board
EPA- Environmental Protection Agency
IP- Ingress Protection

Notes
1. Regulations, Standards and associated certification for standard measures includes but is not necessarily limited to the information below.
2. Primary responsibility remains on the Applicant / Applicants Representative / Project Co-ordinator to ensure all relevant certification / documentation is complete and available for inspection
3. Under heating & electricity upgrades RECI certification is not required if the new installation replaces existing and is taken from an existing electrical circuit with no new wiring. Controlled works Number 3, states that, "The installation or Replacement of one or more extra circuits in an existing installation, including the installation of one or more additional protective devices for such circuits on a distribution board". The replacement of a protective device in a distribution board is Controlled Electrical Works and must be completed by a REC in Domestic Property.
4. The design report and evidence of design competencies are a requirement for all measures and may be requested, however, on SSRH they must be provided as part of the project documentation.

Type of Upgrade	Measure	Regulation & Legislative Requirements	Standards/ Codes of Practice ⁱⁱⁱ	Product Datasheet	CE Mark ⁱ	Declaration of Conformity ⁱⁱ	Certification	Commissioning Report by professional installer/ technician	Safe Electric/RECI	O&M manual (Evidende of it provided to the end user)	Photographic Evidence	Additional Checks
Fabric Upgrades	Attic insulation	Building Regulations TGD Part F Building Regulations TGD Part L (Buildings other than Dwellings) for backstop maximum U values	Irish Agrément (or equivalent) certification is issued, all sections of the certificate must be met whether it is calculations, ventilations requirements, vapour barrier check etc.	Yes Guidance on walkways etc.	Yes	Yes	1) Evidence of the areas detailed in the Irish Agrément (or equivalent) certificate must be provided (photos, calculations etc.) 2) Installer Certification, certifying the area m2 insulated, type of insulation and depth of insulation	-	-	-	Yes	-
	Flat roof insulation	Building Regulations TGD Part L (Buildings other than Dwellings) for backstop maximum U values	-	Yes	Yes	Yes	Installer Certification certify the area m2 insulated, type of insulation and depth of insulation	-	-	-	Yes	-
	Cavity wall insulation	Building Regulations TGD Part L (particularly Major Renovations) Building Regulations TGD Part L (particularly Major Renovations)	NSAI Agrément Certificate BS 5970 or EN equivalent - Thermal Insulation	Yes	Yes	Yes	1) NSAI Agrément Installer 2) Irish Agrément Certificate for the installed product 3) Installer Certification, certifying the area m2 insulated, type of insulation and depth of insulation	-	-	-	-	Borescope test(s) to be arranged & witnessed by Inspector + take photo/screenshot of borescope result
	External wall insulation	Building Regulations TGD Part L (particularly Major Renovations)	NSAI Agrément Certificate BS 5970 or EN equivalent - Thermal Insulation	Yes	Yes	Yes	1) NSAI Agrément Installer 2) Irish Agrément Certificate for the installed product 3) Installer Certification, certifying the area m2 insulated, type of insulation and depth of insulation	-	-	-	Yes	-
	Internal wall insulation	Building Regulations TGD Part L (particularly Major Renovations)	NSAI Agrément Certificate BS 5970 or EN equivalent - Thermal Insulation	Yes	Yes	Yes	1)NSAI Agrément Certificate for the installed product 2)Installer Certification, certifying the area m2 insulated, type of insulation and depth of insulation	-	-	-	Yes	-
	Floor insulation	Building Regulations TGD Part L (particularly Major Renovations)	CIBSE HVUH/16 Underfloor Heating Design & Installation Guide	Yes	Yes	Yes	1)NSAI Agrément Certificate 2) Installer Certification, certifying the area m2 insulated, type of insulation and depth of insulation	-	-	-	Yes	Installer certification will certify the area m2 insulated, type of insulation and depth of insulation
	Windows	Building Regulations TGD Part L (particularly Major Renovations)	NSAI WEP BFRC BS 8213-4 or EN equivalent	Yes	Yes	Yes	U-value report from manufacturers' / supplier	-	-	Yes (Technical manual guiding safe operation)	Yes	Check for safety features
	Doors	Building Regulations TGD Part L (particularly Major Renovations)	NSAI WEP BFRC BS 8213-5 or EN equivalent	Yes	Yes	Yes	U-value report from manufacturers' / supplier	-	-	Yes	Yes	-
	Structural insulated panels	-	-	Yes	Yes	Yes	Installer Certification	-	-	Yes	Yes	-
	Air tightness	Building Regulations TGD Part L	I.S. EN ISO 9972:2015	-	-	-	NSAI or INAB certified tester	Yes (test report)	-	-	-	-
Heating & Controls	Heating controls only	ETCI	-	Yes (Technical manual)	Yes	Yes	-	Yes	Yes *see note 3	Yes	Yes	User training
	BMS + Heating Controls	Building Regulations TGD Part L ETCI	-	Yes (Technical manual)	Yes	Yes	-	Yes	Yes *see note 3	Yes	Yes	User training
	Gas boiler + controls	Building Regulations TGD Part J Building Regulations TGD Part L	I.S. EN 15316 - 4-1 I.S. EN 15378 I.S. 820 I.S. EN 656 BS 5970 (2012) or EN equivalent	Yes (Technical manual)	Yes	Yes	Eco-design type test certificate boilers <0.5MW	Yes by RGI installer	Yes *see note 3	Yes	Yes	-
	Oil boiler + controls	Building Regulations TGD Part J Building Regulations TGD Part L	BS 5410-2(2013) or EN equivalent BS 5970 (2012) or EN equivalent	Yes (Technical manual)	Yes	Yes	Eco-design type test certificate boilers <0.5MW	Yes Recommend OFTEC/equivalent installer	Yes *see note 3	Yes	Yes	-
	Biomass boiler + controls	Building Regulations TGD Part J Building Regulations TGD Part L Directive (EU) 2015/2193	EN 14213/EN 14214 Bio-liquid/mineral fuel blends to prOPS 24	Yes (Technical manual)	Yes	Yes	EPA licence (if required) Design Competence (SSRH) Design Report (SSRH) Completion Report and Declaration of Completion by the Design Engineer Evidence of notification to Local Fire Office of installation Waste Authorisation if applicable Planning Permission, Fire Safety Certificate and BCAR if applicable WFQA Certification or equivalent for fuel Compliance with Eco-design Directive for boilers <0.5MW If boiler > 1MW must be on EPA MCP register	Yes	Yes *see note 3	Yes	Yes	Design competencies and design report may be requested on any of the non-domestic schemes, however, on SSRH they are a requirement.
	Heat pump	Building Regulations TGD Part L ETCI Directive 2009/125/EC Regulation (EU) 2017/1369	BS EN 14825 or EN equivalent I.S. EN 378-1,2,3,4	Yes	Yes	Yes	1) Qualified Contractor to signoff installation including a description of final scope of works 2) F Gas Technician registration and F Gas Certification if applicable 3) The installation warranty to cover the heat pump(s) and any ancillary works carried out for a minimum of 2 years	Yes	Yes *see note 3 RECI to sign Completion Certificate in respect of the heating system including the heat pump.	Yes	Yes	Is the heat pump SCOP at least 2.5, Confirm Design/Datasheet COP at inspection Is it compliant with Eco-Design Directive 2009/125/EC Evidence the Health and Safety file for the project has been handed over to the applicant
	Water tank	-	-	Yes	Yes	Yes	-	Yes	-	Yes	Yes	-
	Solid fuel stove	Building Regulations TGD Part J Directive 2009/125/EC Regulation (EU) 2017/1369	EN 13240 (free standing stoves) EN 13229 (inset stoves)	Yes	Yes	Yes	-	Yes Recommend commissioned by OFTEC /METAC/ equivalent trained	-	Yes	Yes	-

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Heating & Electricity Upgrades	Storage heaters	ETCI	-	Yes	Yes	Yes	-	-	Yes	Yes	Yes	-
	Solar thermal	Directive 2009/125/EC Regulation (EU) 2017/1369	EN 1289 CIBSE Solar Heating Design & Installation Guide SR 50 Part 2 Thermal Solar Systems	Yes	Yes	Yes	-	Yes	Yes	Yes	Yes	-
	Electric Showers	ETCI	-	Yes	Yes	Yes	-	-	Yes	Yes	Yes	-
	Microgeneration ≤ 11kW eg PV, wind, hydro etc.	S.I. No. 383 of 2008 and S.I. No. 384 of 2008	I.S. 10101:2020+AC1:2020; National Rules for Electrical Installations; Part 712 Photovoltaic systems EN 50549 using the specific Irish protection settings. SR HD 60364-7-712:2016; SR 55 - where relevant IEC 62548 : 1.0 [Published 28-09-2016] EN 62446 Grid Connected photovoltaic systems ESB Networks requirements	Yes	Yes	Yes	1) Test Type Cert from Manufacturer confirming meets EN50549 and Irish settings 2) Copy email of connection request to ESB 3) NCS form 4) Design Report confirming inverter sizing and its rating for installed PV cells. Also East/West orientation of array & associated two peaks of energy output. 5) Planning Permission where applicable	Yes PV must have a commissioning cert for inverter (electrical) and for the PV array (mechanical)	Yes	Yes	Yes	-
	Embedded generation > 11kW eg PV, wind, hydro etc.	S.I. No. 383 of 2008 and S.I. No. 384 of 2009	See above re PV	Yes	Yes	Yes	1) NCS 2) Evidence of ESB Connection offer 3) Test Type Cert from Manufacturer confirming meets EN50549 and Irish settings 4) Design Report confirming inverter sizing and its rating for installed PV cells. Also East/West orientation of array & associated two peaks of energy output. 5) Planning Permission where applicable 6) EGIP witness tests confirmation from ESBN	Yes see above re PV commissioning	Yes	Yes	Yes	Ensure G10 relay is compliant
	CHP >11kW	S.I. No. 383 of 2008 and S.I. No. 298 of 2009 Building Regulations TGD Part L	-	Yes	Yes	Yes	1) NCS 2) Evidence of ESB Connection offer 3) Anaerobic Digestion CHP see Cré Guidelines for Anaerobic Digestion in Ireland 4) EGIP witness tests confirmation from ESBN	Yes	Yes	Yes	Yes	Ensure G10 relay is compliant
	Direct fired radiant panels	-	-	Yes	Yes	Yes	-	Yes	-	Yes	Yes	-
	Solar PV Thermal Hybrid Panels	ETCI	-	Yes	Yes	Yes	-	Yes	Yes	Yes	Yes	-
	Plate heat exchanger	Building Regulations TGD Part L	-	Yes	Yes	Yes	-	Yes	-	Yes	Yes	-
	Inverters	ETCI	-	Yes	Yes	Yes	Type Test Certification from Manufacturer	Yes	-	Yes	Yes	-
Voltage optimisation unit	ETCI	-	Yes	Yes	Yes	-	Yes	Yes	Yes	Yes	-	
Electric Vehicle charging points	ETCI	93/45/EEC I.S. EN IEC 62196 I.S. EN IEC 61439 B I.S. EN IEC 61851 Directive 2014/30/EU Directive 2012/19/EU Directive 2011/65/EU ESB Distribution Code Version 2.0 October 2007 or later The latest National Rules for Electrical Installations (currently ET 101: 2008). Health & Safety Regulations	Yes	Yes	Yes	1) Detailed schematic with the location of EV Ready parking spaces and those which also have a Charge Point installed. 2) Planning permissions or Section 5 Planning exemptions 3) Evidence of dynamic load management capability installed for every ESB Metered Connection used to charge EVs, where required by the Scheme. 4) Copies of the labels installed on all chargers 5) Clear photograph(s) of the Charge Point making the label location visible, of the marked parking space associated with that CP, of the Charging unit IP rating on the nameplate.	Yes	Yes	Yes	Yes	-	
Ventilation Upgrade	AHU	ETCI	I.S. EN 15727 EN-1886:2007	Yes	Yes	Yes	-	Yes	Yes	Yes	Yes	-
	MVHR	Building Regulations TGD Part F Building Regulations TGD Part J Building Regulations TGD Part L	-	Yes	Yes	Yes	-	Yes	Yes	Yes	Yes	-
	DCV	Building Regulations TGD Part F Building Regulations TGD Part J Building Regulations TGD Part L	-	Yes	Yes	Yes	-	Yes	Yes	Yes	Yes	-
Cooling and Refrigeration	Cooling	Building Regulations TGD Part L	BS EN 14825 or EN equivalent	Yes	Yes	Yes	-	Yes	Yes *see note 3	Yes	Yes	-
	Refrigeration	ETCI Directive 2009/125/EC Regulation (EU) 2017/1369	CIBSE ISO 5149-1	Yes	Yes	Yes	-	Yes	Yes *see note 3	Yes	Yes	-
	Cooling tower	Safety, Health and Welfare at Work (Construction) Regulations, 2013 (S.I. No 291 of 2013) Safety, Health and Welfare at Work Act, 2005 (S.I. No 10 of 2005) Section 8 & 12 Safety, Health and Welfare at Work (General Application) Regulations, 2007 (S.I. No. 299 of 2007). Regulations 29 & 30 maintenance of work equipment Safety, Health and Welfare at Work (Biological Agents) Regulations, 2013 (S.I. No. 572 of 2013) Safety, Health and Welfare at Work (Chemical Agents) Regulations, 2001 (S.I. No 619 of 2001)	ISO 16345:2014	Yes	Yes	Yes	1) Site specific risk assessment for Legionella control in the system 2) Maintenance Plan 3) Evidence of control measures to control Legionella growth 4) Evidence of Information, training and instruction to employees	Yes Yes *see note 3	Yes	Yes	Yes	-
	Fans	ETCI	-	Yes	Yes	Yes	-	Yes	Yes *see note 3	Yes	Yes	-
Motor, Drives Upgrades, Controls	Control panel	-	-	Yes	Yes	Yes	-	Yes	Yes	Yes	Yes	-
	Variable Speed Drives	-	-	Yes	Yes	Yes	-	Yes	Yes	Yes	Yes	-
	SCADA & control upgrades	-	-	Yes	Yes	Yes	-	Yes	Yes	Yes	Yes	-
	Metering	Building Regulations TGD Part L ETCI	I.S. EN 1434-6:2015+A1:2019 S.R. CEN/TR 13582:2021	Yes	Yes	Yes	-	Yes	Yes **	Yes	Yes	** Required if actual voltage is measured
Lighting Upgrades	LED lights - Replacing lamp only (like for like)	Building Regulations TGD Part L ETCI	CIBSE lighting code I.S. EN 12464-1:2021 I.S. EN 1838:2013 I.S. EN 13201	Yes	Yes	Yes	1) Certificate of Completion from the Contractor confirming the number of lights/ fittings installed 2) Plan/drawing detailing fitting locations	-	-	-	Yes	-
	LED lights - Changes to fitting/types of lamps etc.	Directive 2009/125/EC Regulation (EU) 2017/1369	I.S. EN IEC 62031:2020&A11:2021	Yes	Yes	Yes	1) Certificate of Completion from the Contractor confirming the number of lights/ fittings installed 2) Plan/drawing detailing fitting locations	Yes	Yes	-	Yes	-
	Emergency lighting	ETCI	IS 3217 2013 I.S. EN 1838:2013	Yes	Yes	Yes	1) Signed C4 commissioning cert and C5 handover sheet in accordance with IS3217:2013 standards 2) Plan/drawing detailing fitting locations	Yes	Yes	-	Yes	-
	Public lighting	-	IS EN 13201	Yes	Yes	Yes	Certificate of Completion from: 1) the Contractor 2) the Public Body confirming they are installed as per the lighting standards EN13201 3) Plan/drawing detailing fitting locations	-	-	-	Yes	-
Other Upgrades	Core bake oven	-	-	Yes	Yes	Yes	-	Yes (if gas)	Yes	Yes	Yes	-

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	Pool Cover	-	-	Yes	Yes	Yes	-	Yes ***	Yes ***	Yes	Yes	*** Required if motorised pool cover
Pipes/Ducts	Insulated Pipework	Building Regulations TGD Part L	BS 5970 or EN equivalent - Thermal Insulation	Yes	Yes	Yes	-	-	-	-	Yes	-
	Cooling Pipework	Building Regulations TGD Part L	BS 5970 or EN equivalent - Thermal Insulation	Yes	Yes	Yes	-	-	-	-	Yes	-
	Ductwork	Building Regulations TGD Part L	BS 5970 or EN equivalent - Thermal Insulation	Yes	Yes	Yes	-	-	-	-	Yes	-

ⁱ & ⁱⁱ Inspector must see the CE Mark but if this is not visible a Declaration of Conformity is to be provided

ⁱ CE mark implies compliance with the EU Eco-design Directive and Regulations where applicable

ⁱⁱⁱ These are mainly functional standards rather than minimum thermal efficiency standards. The latter are as per the conditions of the Scheme and/or the Final Specification