

INDUSTRY AND ENERGY SUPPLY PROTOCOLS:

QUALIFICATIONS AND CERTIFICATIONS LIST

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INTRODUCTION

The Investor Confidence Project (ICP) is a global initiative that focuses on increasing energy efficiency deal flow by ensuring that projects are engineered robustly, financial returns are predictable, and project underwriting can be streamlined. The ICP system is comprised of the ICP Protocols and the Investor Ready Energy Efficiency[™] Certification which offer a standardised roadmap for project developers, a market tested methodology for programme administrators, and a certification system for investors and facility owners to accurately and efficiently manage project risk.

ICP is administered by Green Business Certification Inc. (GBCI) and was conceived, incubated and developed by the Environmental Defense Fund (<u>www.edf.org</u>).

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For more information, please visit:

ICP North America (www.eeperformance.org) or ICP Europe (europe.eeperformance.org).

This Qualifications and Certifications List supports the Industry and Energy Supply protocols. It summarises information gathered to date by country on national or European certifications and qualifications which can be used to support ICP projects and network members within each European member state.

This document is intended to be a living document, evolving over time as it is applied to industrial and energy supply projects. In some cases, a relevant national resource has not yet been identified. Members of the ICP invite engineers, facility owners, software developers, prospective lenders and investors, and others to participate in developing this list for their countries to recommend additional or alternative national resources or certifications.



AUSTRIA

	A nationally		Scheme: European Energy Manager (IHK)
Individual	recognised	Relevant European or International Resource	Provider: Training provided at 3 locations in Austria – Austrian Chamber of Commerce (WKO), WIFI-Styria,
carrying out	energy savings		Schloss Hofen/FH Vorarlberg
savings calculations	calculation	National Certifications / Qualifications	Not available
calculations	certification	National Certifications / Qualifications	
	A nationally	Relevant European or International Resource	Not available
Commissioning	recognised		
(OPV Resource)	commissioning	National Certifications / Qualifications	Not available
	certification		
	National	Relevant European or International Resource	EN 16247 (Part 1-5) Energy Audits
	requirements for individuals		
Energy Auditors	or organisations	National Certifications / Qualifications	Scheme: Internal Energy Auditor according to Energy Efficiency Law (Interner Energieauditor nach EEffG) Provider: Quality Austria
	conducting		
	energy audits		
	A nationally	Relevant European or International Resource	Not available
	recognised	Relevant European of International Resource	
Installers	equipment		Scheme: Certified heat pump / solar thermal / photovoltaic / comfort ventilation installer and planner
	installers	National Certifications / Qualifications	Provider: Austrian Institute of Technology (AIT) and WIFI Österreich
	certification		
			Energy Efficiency Directive (2012/27/EU; EED), which sets explicit requirements to promote the market of
	National	Relevant European or International Posourco	energy services through its Article 18 Scheme: European Energy Manager (IHK)
Project	requirements or	Relevant European or International Resource	Provider: Training provided at 3 locations in Austria – Austrian Chamber of Commerce (WKO), WIFI-Styria,
Developers	certifications for		Schloss Hofen/FH Vorarlberg
	Energy Service		Scheme: Assessment of implementation of energy efficiency services (EEDL), set quality level for it.
	Companies	National Certifications / Qualifications	Provider: DECA (Dienstleister Energieeffizienz und Contracting Austria / Austrian Energy Efficiency and
			Performance Contractors) Quality Seal



BELGIUM (FLEMISH REGION)

Individual	A nationally recognised	Relevant European or International Resource	Scheme: European Energy Manger (IHK) Provider: Training in Belgium provided by UCLL Energy
carrying out savings calculations	energy savings calculation certification	National Certifications / Qualifications	Not available
Commissioning	A nationally recognised	Relevant European or International Resource	Not available
(OPV Resource)	commissioning certification	National Certifications / Qualifications	Not available
	National requirements	Relevant European or International Resource	EN 16247 (Part 1-5) Energy Audits
Energy Auditors	for individuals or organisations conducting energy audits	National Certifications / Qualifications	Scheme: None Provider: 'Vlaams Energieagentschap' - The Energy Agency, with assistance from the Verification Agency 'Verificatiebureau Benchmarking Vlaaderen' (VBBV)
	A nationally recognised	Relevant European or International Resource	Not available
Installers	equipment installers certification	National Certifications / Qualifications	Scheme: Certification of installers of small scale renewable energy solutions Provider: The Renewable Energy Systems Certification Organisation (RESCERT) Harmonised across Walloon, Flanders & Brussels.
Project Developers	National requirements or certifications for Energy	Relevant European or International Resource	Energy Efficiency Directive (2012/27/EU; EED), which sets explicit requirements to promote the market of energy services through its Article 18 Scheme: European Energy Manger (IHK) Provider: Training in Belgium provided by UCLL Energy
Densipers	Service Companies	National Certifications / Qualifications	Not available



BELGIUM (BRUSSELS REGION)

Individual	A nationally recognised	Relevant European or International Resource	Scheme: European Energy Manger (IHK) Provider: Training in Belgium provided by UCLL Energy
carrying out savings calculations	energy savings calculation certification	National Certifications / Qualifications	Not available
Commissioning	A nationally recognised	Relevant European or International Resource	Not available
(OPV Resource)	commissioning certification	National Certifications / Qualifications	Not available
	National requirements	Relevant European or International Resource	EN 16247 (Part 1-5) Energy Audits
Energy Auditors	for individuals or organisations conducting energy audits	National Certifications / Qualifications	Scheme: None Provider: The Brussels Region Authority
	A nationally recognised	Relevant European or International Resource	Not available
Installers	equipment installers certification	National Certifications / Qualifications	Scheme: Certification of installers of small scale renewable energy solutions Provider: The Renewable Energy Systems Certification Organisation (RESCERT) Harmonised across Walloon, Flanders & Brussels.
Project Developers	National requirements or certifications for Energy	Relevant European or International Resource	Energy Efficiency Directive (2012/27/EU; EED), which sets explicit requirements to promote the market of energy services through its Article 18 Scheme: European Energy Manger (IHK) Provider: Training in Belgium provided by UCLL Energy
	Service Companies	National Certifications / Qualifications	Not available



	A nationally		Scheme: European Energy Manger (IHK)
Individual	recognised	Relevant European or International Resource	Provider: Training in Belgium provided by UCLL Energy
carrying out savings calculations	energy savings calculation certification	National Certifications / Qualifications	Not available
Commissioning	A nationally recognised	Relevant European or International Resource	Not available
(OPV Resource)	commissioning certification	National Certifications / Qualifications	Not available
	National requirements	Relevant European or International Resource	EN 16247 (Part 1-5) Energy Audits
Energy Auditors	for individuals or organisations conducting energy audits	National Certifications / Qualifications	Scheme: 1 day training course Provider: Pirotech
	A nationally recognised	Relevant European or International Resource	Not available
Installers	equipment installers certification	National Certifications / Qualifications	Scheme: Certification of installers of small scale renewable energy solutions Provider: The Renewable Energy Systems Certification Organisation (RESCERT) Harmonised across Walloon, Flanders & Brussels.
Project Developers	National requirements or certifications for Energy Service	Relevant European or International Resource	Energy Efficiency Directive (2012/27/EU; EED), which sets explicit requirements to promote the market of energy services through its Article 18 Scheme: European Energy Manger (IHK) Provider: Training in Belgium provided by UCLL Energy
	Companies	National Certifications / Qualifications	Not available





BULGARIA

Individual	A nationally recognised	Relevant European or International Resource	Scheme: European Energy Manger (IHK) Provider: Training in Bulgaria provided by WIFI Bulgaria, Sofia
carrying out savings calculations	energy savings calculation certification	National Certifications / Qualifications	Not available
Commissioning	A nationally recognised	Relevant European or International Resource	Not available
(OPV Resource)	commissioning certification	National Certifications / Qualifications	Not available
	National requirements	Relevant European or International Resource	EN 16247 (Part 1-5) Energy Audits
Energy Auditors	for individuals or organisations conducting energy audits	National Certifications / Qualifications	Scheme: Examinations at higher technical schools accredited by an examination board including professors, representatives of the Ministry of Economy, the Ministry of Investment and the Design Agency Provider: The Sustainable Energy Development Agency (SEDA)
	A nationally	Relevant European or International Resource	Not available
Installers	Installers Installers installers certification	National Certifications / Qualifications	Scheme: Vocational education and training for Technicians of Renewable Energy Sources Provider: Bulgaria Centre for Testing and European Certification
Droiost	National requirements or certifications	Relevant European or International Resource	Energy Efficiency Directive (2012/27/EU; EED), which sets explicit requirements to promote the market of energy services through its Article 18 Scheme: European Energy Manger (IHK) Provider: Training in Bulgaria provided by WIFI Bulgaria, Sofia
Project Developers	for Energy Service Companies	National Certifications / Qualifications	Scheme: Register of Energy Performing Contracting (EPCs) which have signed the European Code of Conduct for EPC. Provider: Sustainable Energy Development Agency (SEDA) Scheme: Certificate of Legal Capacity for Design Provider: Chamber of Architects (CAB), Chamber of Engineers in Investment Design (CEEP)



CROATIA

Individual	A nationally	Delawart Guerra and Internetional Decourse	Scheme: European Energy Manager (IHK)
carrying out	recognised	Relevant European or International Resource	Provider: Training in Croatia provided by the Croatian Chamber of Commerce and Industry
savings calculations	energy savings calculation certification	National Certifications / Qualifications	Not available
Commissioning	A nationally recognised	Relevant European or International Resource	Not available
(OPV Resource)	commissioning certification	National Certifications / Qualifications	Not available
	National	Relevant European or International Resource	EN 16247 (Part 1-5) Energy Audits
Energy Auditors	requirements for individuals or organisations conducting energy audits	National Certifications / Qualifications	Scheme: 10 educational institutions granted authorisation to conduct training for energy certifiers Providers: College of SlavonskiBrod, Faculty of Civil Engineering at the University of Zagreb, Faculty of Engineering at the University of Rijeka, Energy Institute HrvojePožar, Faculty of Mechanical Engineering and Naval Architecture at the University of Zagreb, Brodarskiinstitutd.o.o., Society of Civil Engineers Zagreb, Croatian Chamber of Mechanical Engineers, Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture at the University of Split, Faculty of Civil Engineering Osijek at the Josip Juraj Strossmayer University of Osijek
	A nationally recognised	Relevant European or International Resource	Not available
Installers	equipment installers certification	National Certifications / Qualifications	Scheme: Certification of installers for small RES systems Provider: Certified by Ministry of Construction
Project Developers	National requirements or certifications for Energy	Relevant European or International Resource	Energy Efficiency Directive (2012/27/EU; EED), which sets explicit requirements to promote the market of energy services through its Article 18 Scheme: European Energy Manager (IHK) Provider: Training in Croatia provided by the Croatian Chamber of Commerce and Industry
	Service Companies	National Certifications / Qualifications	Not available



CYPRUS

	A nationally		Scheme: European Energy Manager (IHK)
Individual	recognised	Relevant European or International Resource	Provider: Training in Cyprus provided by the Cyprus Energy Agency
carrying out savings calculations	energy savings calculation certification	National Certifications / Qualifications	Not available
Commissioning	A nationally recognised	Relevant European or International Resource	Not available
(OPV Resource)	commissioning certification	National Certifications / Qualifications	Not available
	National requirements	Relevant European or International Resource	EN 16247 (Part 1-5) Energy Audits
Energy Auditors	for individuals or organisations conducting energy audits	National Certifications / Qualifications	Scheme: Certification required with training dependent on 3 different categories broken down by sector. Provider: The Ministry of Energy, Commerce, Industry and Tourism (MECIT)
	A nationally recognised	Relevant European or International Resource	Not available
Installers	equipment installers certification	National Certifications / Qualifications	Scheme: Qualification for small scale RES installers Provider: Certified by Energy Service of the Ministry of Energy, Commerce, Industry & Tourism
Project Developers	National requirements or certifications for Energy	Relevant European or International Resource	Energy Efficiency Directive (2012/27/EU; EED), which sets explicit requirements to promote the market of energy services through its Article 18 Scheme: European Energy Manager (IHK) Provider: Training in Cyprus provided by the Cyprus Energy Agency
	Service Companies	National Certifications / Qualifications	Not available

INVESTOR CONFIDENCE PROJECT

CZECH REPUBLIC

	A nationally		Scheme: European Energy Manager (IHK)
Individual	Relevant European or International Resource	Provider: Training in the Czech Republic provided by the German-Czech Chamber of Commerce and Industry	
carrying out savings calculations	energy savings calculation	National Certifications / Qualifications	Not available
	certification A nationally	Relevant European or International Resource	Not available
Commissioning (OPV Resource)	recognised commissioning certification	National Certifications / Qualifications	Not available
	National	Relevant European or International Resource	EN 16247 (Part 1-5) Energy Audits
Energy Auditors	for individuals or organisations conducting energy audits	National Certifications / Qualifications	Scheme: Mandatory exams and continuing education Provider: The Association of Energy Auditors and the Czech Chamber of Certified Architects.
	A nationally recognised	Relevant European or International Resource	Not available
Installers	equipment installers certification	National Certifications / Qualifications	Scheme: Solar thermal systems installer Provider: Certified by the Ministry for Industry and Trade
Project Developers	National requirements or certifications for Energy	Relevant European or International Resource	Energy Efficiency Directive (2012/27/EU; EED), which sets explicit requirements to promote the market of energy services through its Article 18 Scheme: European Energy Manager (IHK) Provider: Training in the Czech Republic provided by the German-Czech Chamber of Commerce and Industry
Developers	Service Companies	National Certifications / Qualifications	Not available



DENMARK

Individual	A nationally recognised	Relevant European or International Resource	Not available
carrying out savings calculations	energy savings calculation certification	National Certifications / Qualifications	Not available
Commissioning	A nationally recognised	Relevant European or International Resource	Not available
(OPV Resource)	commissioning certification	National Certifications / Qualifications	Not available
	National requirements	Relevant European or International Resource	EN 16247 (Part 1-5) Energy Audits
Energy Auditors	for individuals or organisations conducting energy audits	National Certifications / Qualifications	Scheme: Voluntary training available. Provider: DI Energie.
	A nationally	Relevant European or International Resource	Not available
Installers	recognised equipment installers certification	National Certifications / Qualifications	Scheme: Approval for renewable energy sources installer Provider: Certified by Danish Energy Agency
	National requirements or	Relevant European or International Resource	Energy Efficiency Directive (2012/27/EU; EED), which sets explicit requirements to promote the market of energy services through its Article 18
Project Developers	certifications for Energy Service Companies	National Certifications / Qualifications	Not available



ESTONIA

Individual	A nationally recognised	Relevant European or International Resource	Scheme: European Energy Manager (IHK) Provider: Training in Estonia provided by the Estonian Chamber of Commerce and Industry (ECCI)
carrying out savings calculations	energy savings calculation certification	National Certifications / Qualifications	Not available
Commissioning	A nationally recognised	Relevant European or International Resource	Not available
(OPV Resource)	commissioning certification	National Certifications / Qualifications	Not available
	National requirements	Relevant European or International Resource	EN 16247 (Part 1-5) Energy Audits
Energy Auditors	for individuals or organisations conducting energy audits	National Certifications / Qualifications	Scheme: Some voluntary & some mandatory training / certification Provider: EKVÜ, with Tallinn University of Technology.
	A nationally recognised	Relevant European or International Resource	Not available
Installers	equipment installers certification	National Certifications / Qualifications	Scheme: Renewable Energy Installers in Estonian Qualification Framework Provider: Certified by Kutsekoda
Project Developers	National requirements or certifications for Energy	Relevant European or International Resource	Energy Efficiency Directive (2012/27/EU; EED), which sets explicit requirements to promote the market of energy services through its Article 18 Scheme: European Energy Manager (IHK) Provider: Training in Estonia provided by the Estonian Chamber of Commerce and Industry (ECCI)
Dereiopers	Service Companies	National Certifications / Qualifications	Not available



FINLAND

	A nationally		Scheme: European Energy Manager (IHK)
Individual	recognised	Relevant European or International Resource	Provider: Training in Finland provided by AEL
carrying out savings calculations	energy savings calculation	National Certifications / Qualifications	Not available
calculations	certification		
	A nationally	Relevant European or International Resource	Not available
Commissioning	recognised		
(OPV Resource)	commissioning	National Certifications / Qualifications	Not available
	certification		
	National	Relevant European or International Resource	EN 16247 (Part 1-5) Energy Audits
	requirements for individuals		
Energy Auditors	or organisations	National Certifications / Qualifications	Scheme: Mandatory energy auditor training and examination Provider: Motvia.
	conducting		
	energy audits		
	A nationally	Relevant European or International Resource	Not available
	recognised	Relevant European of International Resource	
Installers	equipment	National Certifications / Qualifications	Scheme: Voluntary certification system for the installers of the renewable energy systems Provider: Motvia
	installers		
	certification		
	National		Energy Efficiency Directive (2012/27/EU; EED), which sets explicit requirements to promote the market of
	requirements or	Relevant European or International Resource	energy services through its Article 18
Project	certifications		Scheme: European Energy Manager (IHK)
Developers	for Energy		Provider: Training in Finland provided by AEL
	Service	National Certifications / Qualifications	Not available
	Companies		



FRANCE

Individual	A nationally recognised	Relevant European or International Resource	Not available
carrying out savings calculations	energy savings calculation certification	National Certifications / Qualifications	Not available
Commissioning	A nationally recognised	Relevant European or International Resource	Not available
(OPV Resource)	commissioning certification	National Certifications / Qualifications	Not available
	National requirements	Relevant European or International Resource	EN 16247 (Part 1-5) Energy Audits
Energy Auditors	for individuals or organisations conducting energy audits	National Certifications / Qualifications	Scheme: Required for external auditors, not required for internal auditors Provider: ADEME (Agence de l'environnementet de la maîtrise de l'énergie)
	A nationally	Relevant European or International Resource	Not available
Installers	recognised equipment installers certification	National Certifications / Qualifications	Scheme: Recognized as a guarantee for the environment (RGE) Provider: Certified by Cofrac
	National requirements or	Relevant European or International Resource	Energy Efficiency Directive (2012/27/EU; EED), which sets explicit requirements to promote the market of energy services through its Article 18
Project Developers	certifications for Energy Service Companies	National Certifications / Qualifications	Not available



GERMANY

Individual carrying out savings calculations	A nationally recognised energy savings calculation certification	Relevant European or International Resource National Certifications / Qualifications	DIN EN 16212 – Energy efficiency and savings calculations – Top-down and bottom-up methods (Energieeffizienz- und -einsparberechnung - Top-Down- und Bottom-Up-Methoden) VDI 4662 – Education, Implementation and use of energy characteristics (Bildung, Implementierung und Nutzung von Energiekennwerten) Scheme: European Energy Manager (IHK) Provider: Training provided at 16 different locations around Germany. More information can be found here: https://www.energymanager.eu/trainingsorte/trainingsanbieter-in-deutschland/ Not available
Commissioning	A nationally recognised	Relevant European or International Resource	Not available
(OPV Resource)	commissioning certification	National Certifications / Qualifications	Not available
	National requirements	Relevant European or International Resource	EN 16247 (Part 1-5) Energy Audits
Energy Auditors	for individuals or organisations conducting energy audits	National Certifications / Qualifications	Scheme: Voluntary training available Provider: Private companies/chambers of commerce and industry (e.g. TÜV, IHK, DEKRA)
	A nationally	Relevant European or International Resource	Not available
Installers	recognised equipment installers certification	National Certifications / Qualifications	Scheme: Exercise of a skilled craft subject to a licence pursuant to the Crafts Code: Renewable Energy Installer Provider: Chambers of Skilled Crafts (Meister Examinations) and Guilds of Skilled Crafts (Journeyman's Examinations).
Project Developers	National requirements or certifications for Energy Service	Relevant European or International Resource	Energy Efficiency Directive (2012/27/EU; EED), which sets explicit requirements to promote the market of energy services through its Article 18 Scheme: European Energy Manager (IHK) Provider: Training provided at 16 different locations around Germany. More information can be found here: https://www.energymanager.eu/trainingsorte/trainingsanbieter-in-deutschland/
	Companies	National Certifications / Qualifications	Not available



GREECE

	A nationally		Scheme: European Energy Manager (IHK)
Individual	recognised	Relevant European or International Resource	Provider: Training in Greece provided by the German-Greek Chamber of Industry and Commerce
carrying out savings calculations	energy savings calculation certification	National Certifications / Qualifications	Not available
Commissioning	A nationally recognised	Relevant European or International Resource	Not available
(OPV Resource)	commissioning certification	National Certifications / Qualifications	Not available
	National requirements	Relevant European or International Resource	EN 16247 (Part 1-5) Energy Audits
Energy Auditors	for individuals or organisations conducting energy audits	National Certifications / Qualifications	Scheme: Voluntary training available Provider: The Centre for Renewable Energy Sources and Saving (CRES) and the Technical Chamber of Greece (TEE).
	A nationally recognised	Relevant European or International Resource	Not available
Installers	equipment installers certification	National Certifications / Qualifications	Scheme: None
Project Developers	National requirements or certifications for Energy	Relevant European or International Resource	Energy Efficiency Directive (2012/27/EU; EED), which sets explicit requirements to promote the market of energy services through its Article 18 Scheme: European Energy Manager (IHK) Provider: Training in Greece provided by the German-Greek Chamber of Industry and Commerce
	Service Companies	National Certifications / Qualifications	Not available



HUNGARY

to distribute l	A nationally		Scheme: European Energy Manager (IHK)
Individual	recognised	Relevant European or International Resource	Provider: Training in Hungary provided by the German-Hungarian Chamber of Commerce and Industry
carrying out savings	energy savings calculation	National Contifications / Qualifications	Not available
calculations	certification	National Certifications / Qualifications	
Commissioning	A nationally recognised	Relevant European or International Resource	Not available
(OPV Resource)	commissioning certification	National Certifications / Qualifications	Not available
	National requirements	Relevant European or International Resource	EN 16247 (Part 1-5) Energy Audits
Energy Auditors	for individuals or organisations conducting energy audits	National Certifications / Qualifications	Scheme: Mandatory written exam and optional training class Provider: The Hungarian Energy and Public Utility, MEKH (Magyar Energetikaiés Közmuszabályozási Hivatal)
	A nationally	Relevant European or International Resource	Not available
Installers	recognised equipment installers certification	National Certifications / Qualifications	Scheme: None
Project	National requirements or certifications	Relevant European or International Resource	Energy Efficiency Directive (2012/27/EU; EED), which sets explicit requirements to promote the market of energy services through its Article 18 Scheme: European Energy Manager (IHK) Provider: Training in Hungary provided by the German-Hungarian Chamber of Commerce and Industry
Developers	for Energy Service Companies	National Certifications / Qualifications	Not available



IRELAND

	A nationally	Polovant European or International Posource	Not available
Individual	recognised	Relevant European or International Resource	
carrying out savings calculations	energy savings calculation certification	National Certifications / Qualifications	Not available
	A nationally	Relevant European or International Resource	Not available
Commissioning (OPV Resource)	recognised commissioning certification	National Certifications / Qualifications	Not available
		Relevant European or International Resource	EN 16247 (Part 1-5) Energy Audits ISO 50002:2014 Energy audits: Requirements with guidance for use
Energy Auditors	National requirements for individuals or organisations conducting energy audits	National Certifications / Qualifications	ISO S0002.2014 Energy addits: Requirements with guidance for use Scheme: Any one of the following specific qualificiations required: • Energy Institute Charted Energy Engineer • Energy Institute Charted Energy Manager • Association of Energy Engineers Certified Energy Manager • Association of Energy Engineers Certified Energy Auditor • Practicing Non Domestic BER Assessor in Republic of Ireland with SEAI • ESOS (UK Auditing scheme) Lead Assessor Provider: Energy Institute (EI), Association fo Energy Engineers (AEE), The Sustainable Energy Authority of Ireland (SEAI).
	A nationally	Relevant European or International Resource	Not available
Installers	recognised equipment installers certification	National Certifications / Qualifications	Scheme: Renewable Installers Register Provider: Facilitated by the Sustainable Energy Authority of Ireland (SEAI)
	National requirements or	Relevant European or International Resource	Energy Efficiency Directive (2012/27/EU; EED), which sets explicit requirements to promote the market of energy services through its Article 18
Project Developers	certifications for Energy Service Companies	National Certifications / Qualifications	Not available



ITALY

Individual	A nationally		UNI CEI EN 16212:2012 Energy Efficiency and Savings Calculation – Top-down and Bottom-up Methods
carrying out	recognised	Relevant European or International Resource	Scheme: European Energy Manager (IHK)
savings	energy savings		Provider: Training in Italy provided by Ambiente Italia srl
calculations	calculation	National Certifications / Qualifications	Not available
calculations	certification	National Certifications / Qualifications	
	A nationally	Relevant European or International Resource	Not available
Commissioning	recognised		
(OPV Resource)	commissioning	National Certifications / Qualifications	Not available
	certification	National certifications / Qualifications	
	National	Relevant European or International Resource	EN 16247 (Part 1-5) Energy Audits
	requirements	nelevant European of international Resource	
En anna Analta an	for individuals		
Energy Auditors	or organisations	National Certifications / Qualifications	Scheme: UNI CEI 11339:2009 – Energy Management: Experts in Energy Management
	conducting	National Certifications / Qualifications	Provider: Provided by several entities (SECEM-FIRE, Certiquality, KIWA and more)
	energy audits		
	A nationally	Relevant European or International Resource	Not available
	recognised		
Installers	equipment		Scheme: Qualification for RES installers
	installers	National Certifications / Qualifications	Provider: Facilitated by the National Agency for New Technologies, Energy and Sustainable Economic
	certification		Development. Training provided by Italian Regional administrations.
	National		Energy Efficiency Directive (2012/27/EU; EED), which sets explicit requirements to promote the market of
	requirements or	Relevant European or International Resource	energy services through its Article 18
Project	certifications	Relevant European of International Resource	Scheme: European Energy Manager (IHK)
Developers	for Energy		Provider: Training in Italy provided by Ambiente Italia srl
Developers	Service		Scheme: UNI CEI 11352 – Energy Management – companies providing energy services (ESCo) – General
	Companies	National Certifications / Qualifications	requiremenrs and checklist for the verification of requirements
	companies		Provider: Provided by several entities (RINA, DIMITTO, Bureau Veritas Italy and more)



LATVIA

Individual	A nationally		Scheme: European Energy Manager (IHK)
	recognised	Relevant European or International Resource	Provider: Training in Latvia provided by the Latvian Chamber of Commerce and Industry (Latvijas
carrying out	energy savings		Tirdzniecības un rūpniecības kamera)
savings calculations	calculation		
calculations	certification	National Certifications / Qualifications	Not available
	A nationally	Relevant European or International Resource	Not available
Commissioning	recognised		
(OPV Resource)	commissioning	National Certifications / Qualifications	Not available
	certification	National certifications / Qualifications	
	National	Relevant European or International Resource	EN 16247 (Part 1-5) Energy Audits
	requirements		
	for individuals		
Energy Auditors	or organisations	National Certifications / Qualifications	Scheme: Qualification exams
	conducting		Provider: The National Accreditation Bureau's Centre for Standardisation, Accreditation and Metrology.
	energy audits		
	A nationally	Relevant European or International Resource	Not available
	recognised		
Installers	equipment	· · · · · · · · · · · · · · · · · · ·	Scheme: Unnamed
	installers	National Certifications / Qualifications	Provider: Facilitated by Academic Information Centre and accredited by Latvian National Accreditation
	certification		Bureau
	National		Energy Efficiency Directive (2012/27/EU; EED), which sets explicit requirements to promote the market of
Project Developers	requirements or		energy services through its Article 18
	certifications	Relevant European or International Resource	Scheme: European Energy Manager (IHK)
	for Energy		Provider: Training in Latvia provided by the Latvian Chamber of Commerce and Industry (Latvijas
	Service		Tirdzniecības un rūpniecības kamera)
	Companies	National Certifications / Qualifications	Not available
			1



LITHUANIA

Individual	A nationally recognised	Relevant European or International Resource	Not available
carrying out savings calculations	energy savings calculation certification	National Certifications / Qualifications	Not available
Commissioning	A nationally recognised	Relevant European or International Resource	Not available
(OPV Resource)	commissioning certification	National Certifications / Qualifications	Not available
	National requirements	Relevant European or International Resource	EN 16247 (Part 1-5) Energy Audits
Energy Auditors	for individuals or organisations conducting energy audits	National Certifications / Qualifications	Scheme: Mandatory training Provider: Education institutions approved by the Lithuanian Ministry of Energy.
	A nationally recognised	Relevant European or International Resource	Not available
Installers	equipment installers certification	National Certifications / Qualifications	Scheme: Certification scheme for installers of small-scale (up to 100 kW) RES technologies
	National requirements or	Relevant European or International Resource	Energy Efficiency Directive (2012/27/EU; EED), which sets explicit requirements to promote the market of energy services through its Article 18
Project Developers	certifications for Energy Service Companies	National Certifications / Qualifications	Not available



LUXEMBOURG

Individual	A nationally recognised	Relevant European or International Resource	Not available
carrying out savings calculations	energy savings calculation certification	National Certifications / Qualifications	Not available
Commissioning	A nationally recognised	Relevant European or International Resource	Not available
(OPV Resource)	commissioning certification	National Certifications / Qualifications	Not available
	National requirements	Relevant European or International Resource	EN 16247 (Part 1-5) Energy Audits
Energy Auditors	for individuals or organisations conducting energy audits	National Certifications / Qualifications	Scheme: Training required for self-certification if auditor is not a registered architect or consulting engineer. Certification itself is optional. Provider: "Myenergy"
	A nationally recognised	Relevant European or International Resource	Not available
Installers	equipment installers certification	National Certifications / Qualifications	Scheme: Master craftsmen diploma electrician and Master craftsmen diploma plumber and HVAC (heating, ventilation and air-conditioning) Provider: The Chamber of Skilled Crafts
	National requirements or	Relevant European or International Resource	Energy Efficiency Directive (2012/27/EU; EED), which sets explicit requirements to promote the market of energy services through its Article 18
Project Developers	certifications for Energy Service Companies	National Certifications / Qualifications	Not available



MALTA

Individual	A nationally	Relevant European or International Resource	Not available
carrying out savings calculations	recognised energy savings calculation certification	National Certifications / Qualifications	Not available
Commissioning	A nationally recognised	Relevant European or International Resource	Not available
(OPV Resource)	commissioning certification	National Certifications / Qualifications	Not available
	National requirements	Relevant European or International Resource	EN 16247 (Part 1-5) Energy Audits
Energy Auditors	for individuals or organisations conducting energy audits	National Certifications / Qualifications	Scheme: Mandatory training/certification Provider: Private companies, a list is provided on the Malta Resources Authority (MRA) website.
	A nationally recognised	Relevant European or International Resource	Not available
Installers	equipment installers certification	National Certifications / Qualifications	Scheme: The Registration of Training Courses leading to the Certification of Renewable Energy Systems Installers, providers of Energy Services, Energy Auditors and Energy Managers
	National requirements or	Relevant European or International Resource	Energy Efficiency Directive (2012/27/EU; EED), which sets explicit requirements to promote the market of energy services through its Article 18
Project Developers	certifications for Energy Service Companies	National Certifications / Qualifications	Not available



NETHERLANDS, THE

Individual	A nationally recognised	Relevant European or International Resource	Not available
carrying out savings calculations	energy savings calculation certification	National Certifications / Qualifications	Not available
Commissioning	A nationally recognised	Relevant European or International Resource	Not available
(OPV Resource)	commissioning certification	National Certifications / Qualifications	Not available
	National requirements	Relevant European or International Resource	EN 16247 (Part 1-5) Energy Audits
Energy Auditors	for individuals or organisations conducting energy audits	National Certifications / Qualifications	Scheme: Voluntary training Provider: The Stichting Kwaliteitsborging Installatiesector (Foundation for Quality Assurance in the Installation Sector, KBI) or the Platform for Certification of Environmental and Occupational Health & Safety Management Systems (SCCM).
	A nationally	Relevant European or International Resource	Not available
Installers	recognised equipment installers certification	National Certifications / Qualifications	Scheme: Accreditatie RES Provider: Kwaliteit voor Installaties Nederland (KvINL)
	National requirements or	Relevant European or International Resource	Energy Efficiency Directive (2012/27/EU; EED), which sets explicit requirements to promote the market of energy services through its Article 18
Project Developers	certifications for Energy Service Companies	National Certifications / Qualifications	Not available



POLAND

Individual carrying out	A nationally		Scheme: European Energy Manager (IHK)
	recognised	Relevant European or International Resource	Provider: Training in Poland provided by the Polish National Chamber of Commerce (Krajowa Izba
	energy savings		Gospodarcza)
savings calculations	calculation		
calculations	certification	National Certifications / Qualifications	Not available
	A nationally	Relevant European or International Resource	Not available
Commissioning	recognised		
(OPV Resource)	commissioning	National Certifications / Qualifications	Not available
	certification		
	National	Relevant European or International Resource	EN 16247 (Part 1-5) Energy Audits
	requirements		EN 10247 (Part 1-3) Ellergy Audits
	for individuals		
Energy Auditors	or organisations	National Certifications / Qualifications	Scheme: Voluntary training
	conducting	National Certifications / Qualifications	Provider: The Polish-Japanese Energy Conservation Technology Centre (PJCEE), the Operational Programme Human Capital, 3rd level institutions, research institutions, foundations, associations and private enterprises.
	energy audits		numan capital, sita reveninstitutions, rescaren institutions, roundations, associations and private enterprises.
	A nationally	Relevant Francisco en Internetica el Recorre	Neteveilekle
	recognised	Relevant European or International Resource	Not available
Installers	equipment		
	installers	National Certifications / Qualifications	Scheme: Certification of installers in the field of renewable energy
	certification		Provider: Urząd Dozoru Technicznego (UDT) (Technical Inspection Authority)
	National		Energy Efficiency Directive (2012/27/EU; EED), which sets explicit requirements to promote the market of
Project Developers	requirements or		energy services through its Article 18
	certifications	Relevant European or International Resource	Scheme: European Energy Manager (IHK)
			Provider: Training in Poland provided by the Polish National Chamber of Commerce (Krajowa Izba
	for Energy		Gospodarcza)
	Service Companies	National Certifications / Qualifications	Not available
	companies		



PORTUGAL

Individual	A nationally recognised	Relevant European or International Resource	Not available
carrying out savings calculations	energy savings calculation certification	National Certifications / Qualifications	Not available
Commissioning	A nationally recognised	Relevant European or International Resource	Not available
(OPV Resource)	commissioning certification	National Certifications / Qualifications	Not available
	National requirements	Relevant European or International Resource	EN 16247 (Part 1-5) Energy Audits
Energy Auditors	for individuals or organisations conducting energy audits	National Certifications / Qualifications	Scheme: Mandatory requirement to join the register of Recognised Technicians and Entities provided on the SGCIE website Provider: The Portuguese Management System of Intensive Energy Consumption "SGCIE", Directorate- General for Energy and Geology "DGEG"
	A nationally	Relevant European or International Resource	Not available
Installers	recognised equipment installers certification	National Certifications / Qualifications	Scheme: Technician / Installer of Bioenergy Systems/ Solar Photovoltaic/ Solar Thermal Systems/ Wind Turbine Systems/ Renewable Thermal Energy Systems Provider: Facilitated by LNEG Portugal.
	National requirements or	Relevant European or International Resource	Energy Efficiency Directive (2012/27/EU; EED), which sets explicit requirements to promote the market of energy services through its Article 18
Project Developers	certifications for Energy Service Companies	National Certifications / Qualifications	Not available



ROMANIA

Individual carrying out savings	A nationally recognised energy savings	Relevant European or International Resource	Scheme: European Energy Manager (IHK) Provider: Training in Romania provided by the Romanian Chamber of Commerce and Industry (Camera de Comert si Industrie Cluj)
calculations	calculation certification	National Certifications / Qualifications	Not available
Commissioning	A nationally recognised	Relevant European or International Resource	Not available
(OPV Resource)	commissioning certification	National Certifications / Qualifications	Not available
	National requirements	Relevant European or International Resource	EN 16247 (Part 1-5) Energy Audits
Energy Auditors	for individuals or organisations conducting energy audits	National Certifications / Qualifications	Scheme: Mandatory course must be completed if auditors do not hold a master's degree in energy efficiency or a doctorate in engineering. Provider: 10 universities approved by the Romanian National Regulatory Authority (ANRE).
	A nationally recognised	Relevant European or International Resource	Not available
Installers	equipment installers certification	National Certifications / Qualifications	Scheme: None
Project Developers	National requirements or certifications for Energy Service	Relevant European or International Resource	Energy Efficiency Directive (2012/27/EU; EED), which sets explicit requirements to promote the market of energy services through its Article 18 Scheme: European Energy Manager (IHK) Provider: Training in Romania provided by the Romanian Chamber of Commerce and Industry (Camera de Comert si Industrie Cluj)
	Companies	National Certifications / Qualifications	Not available



SLOVAKIA

المعاركة بالمعار	A nationally		Scheme: European Energy Manager (IHK)
Individual carrying out	recognised	Relevant European or International Resource	Provider: Training in Slovakia by the German-Slovak Chamber of Commerce and Industry
	energy savings		
savings calculations	calculation	National Certifications / Qualifications	Not available
calculations	certification		
	A nationally	Relevant European or International Resource	Not available
Commissioning	recognised		
(OPV Resource)	commissioning	National Certifications / Qualifications	Not available
	certification		
	National	Relevant European or International Resource	EN 16247 (Part 1-5) Energy Audits
	requirements	•	
Energy Auditors	for individuals		
Encisy Additions	or organisations	National Certifications / Qualifications	Scheme: Mandatory training/certification refresher course every 3 years.
	conducting		
	energy audits		
	A nationally	Relevant European or International Resource	Not available
	recognised		
Installers	equipment	National Certifications / Qualifications	Scheme: None
	installers		
	certification		
	National	Relevant European or International Resource	Energy Efficiency Directive (2012/27/EU; EED), which sets explicit requirements to promote the market of
	requirements or		energy services through its Article 18 Scheme: European Energy Manager (IHK)
Project	certifications		Provider: Training in Slovakia by the German-Slovak Chamber of Commerce and Industry
Developers	for Energy	National Certifications / Qualifications	
	Service		Not available
	Companies		



SLOVENIA

Individual	A nationally	Relevant European or International Resource	Scheme: European Energy Manager (IHK) Provider: Training in Slovenia provided by the Jozef Stefan Institute, Energy Efficiency Centre
carrying out savings calculations	recognised energy savings calculation certification	National Certifications / Qualifications	Not available
Commissioning	A nationally recognised	Relevant European or International Resource	Not available
(OPV Resource)	commissioning certification	National Certifications / Qualifications	Not available
	National requirements	Relevant European or International Resource	EN 16247 (Part 1-5) Energy Audits
Energy Auditors	for individuals or organisations conducting energy audits	National Certifications / Qualifications	Scheme: No mandatory requirements for auditors outside the buildings sector.
	A nationally recognised	Relevant European or International Resource	Not available
Installers	equipment installers certification	National Certifications / Qualifications	Scheme: Installer Certification Scheme Provider: Facilitated by the Ministry of Infrastructure
Project Developers	National requirements or certifications for Energy	Relevant European or International Resource	Energy Efficiency Directive (2012/27/EU; EED), which sets explicit requirements to promote the market of energy services through its Article 18 Scheme: European Energy Manager (IHK) Provider: Training in Slovenia provided by the Jozef Stefan Institute, Energy Efficiency Centre
Developers	Service Companies	National Certifications / Qualifications	Not available



SPAIN

	A nationally		Scheme: European Energy Manager (IHK)
Individual carrying out savings calculations	recognised	Relevant European or International Resource	Provider: Training in Spain provided by Escan s.l.
	energy savings calculation certification	National Certifications / Qualifications	Not available
Commissioning	A nationally recognised	Relevant European or International Resource	Not available
(OPV Resource)	commissioning certification	National Certifications / Qualifications	Not available
	National requirements	Relevant European or International Resource	EN 16247 (Part 1-5) Energy Audits
Energy Auditors	for individuals or organisations conducting energy audits	National Certifications / Qualifications	Scheme: Voluntary training available Provider: ENACE (Entidad Nacional de Auditores y Certificadores de Edificación)
	A nationally recognised	Relevant European or International Resource	Not available
Installers	equipment installers certification	National Certifications / Qualifications	Scheme: None
Project Developers	National requirements or certifications for Energy	Relevant European or International Resource	Energy Efficiency Directive (2012/27/EU; EED), which sets explicit requirements to promote the market of energy services through its Article 18 Scheme: European Energy Manager (IHK) Provider: Training in Spain provided by Escan s.l.
Dereiopero	Service Companies	National Certifications / Qualifications	Not available



SWEDEN

Individual	A nationally recognised	Relevant European or International Resource	Not available
carrying out savings calculations	energy savings calculation certification	National Certifications / Qualifications	Not available
Commissioning	A nationally recognised	Relevant European or International Resource	Not available
(OPV Resource)	commissioning certification	National Certifications / Qualifications	Not available
	National requirements	Relevant European or International Resource	EN 16247 (Part 1-5) Energy Audits
Energy Auditors	for individuals or organisations conducting energy audits	National Certifications / Qualifications	Scheme: Mandatory requirement to pass both a written and an oral exam. Internal energy auditors required to meet skills requirements set out by the Swedish Energy Agency (STEM).
	A nationally recognised	Relevant European or International Resource	Not available
Installers	equipment installers certification	National Certifications / Qualifications	Scheme: Certification of installers of small-scale renewable energy technologies Provider: INCERT
	National requirements or	Relevant European or International Resource	Energy Efficiency Directive (2012/27/EU; EED), which sets explicit requirements to promote the market of energy services through its Article 18
Project Developers	certifications for Energy Service Companies	National Certifications / Qualifications	Not available



Individual	A nationally recognised	Relevant European or International Resource	Not available
carrying out savings calculations	energy savings calculation certification	National Certifications / Qualifications	Not available
	A nationally	Relevant European or International Resource	Not available
Commissioning (OPV Resource)	recognised commissioning certification	National Certifications / Qualifications	Scheme: Voluntary training availabe, for example Commissioning engineers grades, Grade 4 minimum recommended Provider: Commissioning Specialists Association
	National	Relevant European or International Resource	EN 16247 (Part 1-5) Energy Audits
Energy Auditors fo	requirements for individuals or organisations conducting energy audits	National Certifications / Qualifications	Scheme: Various one-day training courses Provider: Energy Institute, Institute of Environmental Management Assessment (IEMA) Scheme: Certified Energy Manager International and Certified Energy Auditor International Certification Provider: Association of Energy Engineers (AEE).
	A nationally	Relevant European or International Resource	Not available
Installers	recognised equipment installers certification	National Certifications / Qualifications	Scheme: Microgeneration Certification Scheme (MCS) Provider: A number of certification bodies, accredited by the UK Accreditation Service (UKAS). Scheme: Qualifications in Electrical Installation / Gas Installation / Heating and Ventiliation / Plumbing / Refrigeration and Air-Conditioning - as appropriate. Provider: City & Guilds, BESA Training, Logic Certification among others.
	National requirements or	Relevant European or International Resource	Energy Efficiency Directive (2012/27/EU; EED), which sets explicit requirements to promote the market of energy services through its Article 18
Project Developers	certifications for Energy Service Companies	National Certifications / Qualifications	Not available

