

Renewable energy policy database and support – RES-LEGAL EUROPE

National profile: Sweden

Client: DG Energy

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Berlin, 01 November 2013

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Sweden – summary text

The Kingdom of Sweden promotes renewable electricity through the quota system, tax regulation mechanisms and a subsidy scheme. In Sweden, tax exemptions are the main incentives to support renewable heating. The main incentive for renewable energy use in transport is a tax exemption for biofuels.

In Sweden, the grid operator is obliged to connect electricity generation systems to the grid, transmit electricity and expand the grid. Renewable energy is not given priority. According to the Energy Agency, the construction, use and development of district heating infrastructure in Sweden is not regulated by law.

The following policies aim at promoting the development, installation and use of RES-installations. There is a specific training and certification regulation for the installers of RES plants and grants for research and development in the field of wind energy.

RES-E support schemes

Summary of support schemes

Overview	The Kingdom of Sweden promotes renewable energy through various incentives, the most important of them being the quota system, which is based on a certificate trading system. Furthermore, tax regulation mechanisms and a subsidy scheme have been introduced.
Summary of support system	• **Quota system.** The main incentive for the use of renewable energy sources is a quota system in terms of quota obligations and a certificate trading system. The Electricity Certificates Act obliges energy suppliers to prove that a certain quota of the electricity supplied by them was generated from renewable energy sources. Energy suppliers shall provide this evidence by presenting tradable certificates allocated to the producers of electricity from renewable sources. • **Tax regulation mechanisms.** Electricity generated from wind energy is eligible for tax privileges consisting in a reduction of the real estate tax as defined in the Act on the Federal Real Estate Tax, and a reduction of the energy tax as authorised by the Energy Tax Act. • **Subsidy.** Sweden grants subsidies for photovoltaic installations.
Technologies	Basically, all technologies used for the generation of electricity from renewable sources are eligible for the incentives applicable in Sweden. Some incentives are limited to certain technologies.
Statutory provisions	• Act No. 2011:1200 (Lag om elcertifikat – Electricity Certificates Act) • Regulation No. 2011:1480 (Förordning om elcertifikat – Electricity Certificates Regulation) • Act No. 1994:1776 (Lag om skatt på energi – Energy Tax Act) • Regulation No. 2009:689 (Förordning om statligt stöd till solceller – Regulation on State Subsidies for Solar Panels) • Act No. 1984:1052 (Lag om statlig fastighetsskatt – Act on the Federal Real Estate Tax)

Basic information on legal sources

Name of legal source (original language)	Lag (2011:1200) om elcertifikat	Förordning (2011:1480) om elcertifikat	Act No. 1994:1776 on Energy Tax
Full name			
Name (English)	Act No. 2011:1200 on Electricity Certificates	Regulation No. 2011:1480 on Electricity Certificates	Lag (1994:1776) om skatt på energi
Abbreviated form	Act No. 2011:1200	Regulation No. 2011:1480	Act No. 1994:1776
Entry into force	01.01.2012	01.01.2012	01.01.1995
Last amended on	01.08.2012		01.07.2013
Future amendments			
Purpose	Introducing the trade of certificates and a quota system; obliging electricity suppliers to purchase certificates.	The Regulation complements the Electricity Certificate Act (Act No. 2011:1200).	The Act introduces a tax on energy consumption.
Relevance for renewable energy	The Act aims to promote electricity from renewable sources through a quota system.	The Regulation aims to promote electricity from renewable sources through a quota system.	Tax privileges for electricity from renewable sources.

Link to full text of legal source (original language)	*http://www.notisum.se/rnp/sls/lag/20111200.htm*	http://www.riksdagen.se/sv/Dokument-Lagar/Lagar/Svenskforfattningssamling/Forordning-20111480-om-elce_sfs-2011-1480/	http://www.riksdagen.se/sv/Dokument-Lagar/Lagar/Svenskforfattningssamling/Lag-19941776-om-skatt-pa-en_sfs-1994-1776/
Link to full text of legal source (English)			

Name of legal source (original language)	Lag (1984:1052) om statlig fastighetsskatt	Förordning (2009:689) om statligt stöd till solceller	
Full name			
Name (English)	Act No. 1984:1052 on the Federal Real Estate Tax	Regulation No. 2009:689 on State Subsidies for Solar Panels	
Abbreviated form	Act No. 1984:1052	Regulation No. 2009:689	
Entry into force	18.12.1984	01.07.2009	
Last amended on	01.01.2012	01.07.2013	
Future amendments			
Purpose	Act on the real estate tax.	This regulation establishes provisions on subsidies for solar energy.	
Relevance for renewable energy	Tax benefits for electricity generated from wind energy; tax disadvantages for hydro-electricity.	Investment grants for photovoltaic installations.	
Link to full text of legal source (original language)	http://www.riksdagen.se/sv/Dokument-Lagar/Lagar/Svenskforfattningssamling/Lag-19841052-om-statlig-fas_sfs-1984-1052/	http://www.riksdagen.se/sv/Dokument-Lagar/Lagar/Svenskforfattningssamling/Forordning-2009689-om-statl_sfs-2009-689/	

Link to full text of legal source (English)			

Further information

Institution (name)	Website	Name of contact person (optional)	Telephone number (head office)	E-mail (optional)
Energiemyndigheten – Swedish Energy Agency	http://www.energimyndigheten.se		+46 165 442 000	registrator@energimyndigheten.se
Svenska Kraftnät – Transmission Grid Operator	http://www.svk.se		+ 46 8 475 80 00	registrator@svk.se
Näringsdepartementet – Ministry of Enterprise, Energy and Communications	http://www.regeringen.se/sb/d/1470		+46 840 510 00	registrator@enterprise.ministry.se
Boverket – Swedish National Board of Housing, Building and Planning	http://www.boverket.se		+46 455 353 000	registraturen@boverket.se

Support schemes

Subsidy (Grants for the installation of photovoltaic installations)

Abbreviated form of legal source(s)	• Regulation No. 2009:689	
Summary	Regulation No. 2009:689 authorises grants for the installation of on-grid photovoltaic installations. The installation works must have commenced on 1. July 2009 or later and be completed by 31 December 2016 (§ 2 par. 3 Regulation No. 2009:689). Grants awarded under this scheme cannot be received on top of other public grants, including those of the European Union or tax reduction for labour costs (§ 2 par. 1 Regulation No. 2009:689).	
Eligible technologies	**General information**	Grants are available for the installation of PV installations only (§ 3 par. 2 Regulation No. 2009:689).
	Wind energy	
	Solar energy	Eligible are PV-installations connected to either internal (on the given property) or external grid (§ 3 par. 2 Regulation No. 2009:689). Installations generating both electricity and heat from solar energy (hybrid installations) are eligible only if the electricity generated amounts to at least 20 % of an installation's total annual production (§ 5 par. 2 Regulation No. 2009:689). Only one PV installation per building will be funded. In blocks of flats, the number of eligible PV installations is equal to the number of flats (§ 4 Regulation No. 2009:689).

	Geothermal energy	
	Biogas	
	Hydro-power	
	Biomass	
Amount	Grants amount to 35 % of the eligible costs (§ 5 par. 1 Regulation No. 2009:689). Eligible costs include labour costs, costs of materials and planning costs (§ 6 Regulation No. 2009:689). Costs of the connection to an external electricity grid are excluded from the eligible costs (§ 6 Regulation No. 2009:689). The maximum grant per installation is SEK 1.2 million (§ 5 par. 3 Regulation No. 2009:689). The total eligible costs must not exceed SEK 37,000 (plus VAT) per kW of installed maximum capacity. The eligible costs for hybrid installations must not exceed SEK 90,000 per kW of installed maximum capacity. If the solar system was funded by insurance payments, aid shall be reduced by an amount corresponding to the remuneration (§ 5 par. 4 Regulation No. 2009:689). The total budget for the scheme for the timeframe from 2009 until the end of 2016 is SEK 210 m (€ 25 m).	
Addressees	Eligible are private individuals, municipalities and enterprises planning to install a photovoltaic installation (§ 2 Regulation No. 2009:689). The obligated party is the National Board of Housing, Building and Planning (§ 12 Regulation No. 2009:689).	
Procedure	**Process flow**	• **Application for preliminary decision.** The applicant shall submit his application to the provincial government in charge. Enterprises shall submit their applications prior to the commencement of the project. Other applicants are to submit their applications within 6 months from the

		commencement of the project (§ 10 Regulation No. 2009:689). • **Preliminary decision.** The provincial government in charge decides if and to what extent a grant is awarded (§ 8 par.1 Regulation No. 2009:689). The provincial government also sets deadlines for the completion of the projects (§ 11 Regulation No. 2009:689). • **Application for payment of the grant.** Applicants are to submit a separate application for payment to their provincial government. They have to do so within six months after the project completion date set by the provincial government (§ 12 Regulation No. 2009:689). • **Final decision.** Having assessed an application, the provincial government in charge decides if and to what extent a grant shall be awarded (§ 13 Regulation No. 2009:689). • **Payment.** The grant decided upon shall be paid to the applicant by the National Board of Housing, Building and Planning (§ 12 par. 2 Regulation No. 2009:689).
	Competent authority	The provincial government in charge decides on the award of grants (§ 8 par.1 Regulation No. 2009:689). The National Board of Housing, Building and Planning is responsible for the payment of grants (§ 12 Regulation No. 2009:689). The Energy Agency monitors the scheme and handles claims (§§ 13, 16 and 18 Regulation No. 2009:689).
Flexibility mechanism		
Distribution of costs	**State**	The costs arising from the grant scheme are borne by the state (§ 1

		Regulation No. 2009:689).
	Consumers	
	Plant operator	
	Grid operator	
	European Union	
	Distribution mechanism	

Quota system

Abbreviated form of legal source(s)	• Act No. 2011:1200 • Regulation No. 2011:1480	
Summary	Act No. 2011:1200 obliges electricity suppliers, certain electricity consumers and energy-intensive companies to annually acquire renewable energy certificates in due proportion to their electricity sales and their consumption by a set date (Chapter 4 §§ 1 and 4 Act No. 2011:1200). Furthermore, the Act stipulates the conditions in which owners of renewable energy generation plants may acquire electricity certificates (Chapter 2 §§ 1-13 Act No. 2011:1200).	
Eligible technologies	**General information**	In general, all renewable energy generation technologies are eligible for the quota system (Chapter 1 § 2 No. 2 Act No. 2011:1200). The following conditions apply to all renewable energy generation technologies except hydro-power plants: If a plant's electricity output has been increased following an investment that took place after 2006, only the additional output is eligible (Chapter 2 § 8 Act No. 2011:1200). Electricity certificates may be awarded for energy generation from existing plants for which certificates were issued before only if the plant was extensively renovated or other investments were made in the plant that give reason to consider it a new facility (Chapter 2 § 9 Act No. 2011:1200). The requirements for such investments are specified in § 7 Regulation No. 2011:1480.

	Wind energy	Eligible (Chapter 1 § 2 No. 2 Act No. 2011:1200).
	Solar energy	Eligible (Chapter 1 § 2 No. 2 Act No. 2011:1200).
	Geothermal energy	Eligible (Chapter 1 § 2 No. 2 Act No. 2011:1200).
	Biogas	Eligible (Chapter 1 § 2 No. 2 Act No. 2011:1200; § 2 Regulation No. 2011:1480).

	Hydro-power	• Electricity from wave energy is fully eligible (Chapter 1 § 2 No. 2 Act No. 2011:1200).
		• Other forms of hydro-electricity are eligible only if generated by plants which
		  ○ were commissioned after 2002,
		  ○ were in operation on 1 May 2003 and have a capacity of no more than 1500 kW, or
		  ○ were taken out of operation before 1 July 2001 and were recommissioned after 2002 after major reconstructions or other investments so that the plant may be considered new (Chapter 2 § 5 1 Act No. 2011:1200)
		  ○ For existing plants with a capacity exceeding 1,500 kW, whose capacity was upgraded with an investment that took place after 30 April 2003. Only the additional output is eligible (Chapter 2 §§ 5 and 8 Act No. 2011:1200).
		• Plants not covered by these definitions may qualify only if changes in the legal framework have made their profitable operation impossible, or if they have a capacity of 15 MW or less and have become unprofitable after renewal (Chapter 2 § 6 Act No. 2011:1200).

<table>
<tr><td></td><td>Biomass</td><td>Eligible (Chapter 1 § 2 No. 2 Act No. 2011:1200; § 2 Regulation No. 2011:1480).</td></tr>
<tr><td>Amount</td><td>Amount of quota and period of application</td><td>The quotas for the period from 2012 to 2035 have been set as follows (Chapter 4 § 4 Act No. 2011:1200):
<table>
<tr><th>Obligation period</th><th>Quota obligation per MWh of electricity sold or consumed</th></tr>
<tr><td>2012</td><td>0.179</td></tr>
<tr><td>2013</td><td>0.135</td></tr>
<tr><td>2014</td><td>0.142</td></tr>
<tr><td>2015</td><td>0.143</td></tr>
<tr><td>2016</td><td>0.144</td></tr>
<tr><td>2017</td><td>0.152</td></tr>
<tr><td>2018</td><td>0.168</td></tr>
<tr><td>2019</td><td>0.181</td></tr>
<tr><td>2020</td><td>0.195</td></tr>
<tr><td>2021</td><td>0.190</td></tr>
<tr><td>2022</td><td>0.180</td></tr>
<tr><td>2023</td><td>0.170</td></tr>
<tr><td>2024</td><td>0.161</td></tr>
<tr><td>2025</td><td>0.149</td></tr>
<tr><td>2026</td><td>0.137</td></tr>
<tr><td>2027</td><td>0.124</td></tr>
<tr><td>2028</td><td>0.107</td></tr>
<tr><td>2029</td><td>0.092</td></tr>
<tr><td>2030</td><td>0.076</td></tr>
</table></td></tr>
</table>

		2031: 0.061 2032: 0.045 2033: 0.028 2034: 0.012 2035: 0.008
	Adjustment of quotas	The procedure for changing the quota levels is not defined by law. For this reason, it will be necessary to amend the act governing the quota obligation.
	Number of certificates according to technology	One certificate is issued for every MWh of electricity produced, regardless of the generation technology employed (Chapter 3 § 2 Act No. 2011:1200).
	Minimum price per certificate	
	Fees and penalty charges	**Quota obligation fine.** Obligated persons that fail to satisfy their quota obligation shall pay a quota obligation fine. Each certificate not invalidated carries a fine of 150% of the weighed, average certificate value during the applicable obligation period (Chapter 6 § 1 Act No. 2011:1200).
	Yearly Average Certificate Price	According to the Swedish Energy Agency, the average price per certificate (per MWh) was178.50 kronor (approx. € 20.26) in the period from 1 April 2012 until 31 March 2013.
Eligibility period	Solar and geothermal plants commissioned prior to 1st May 2003 will become ineligible at the end of 2012 (Chapter 2 § 7 no. 1 Act No. 2011:1200); Certain plants using wind or hydro energy, biogas or biomass and commissioned prior to 1 May	

	2003 will become ineligible at the end of 2012 or 2014 (Chapter 2 § 7 no. 1 Act No. 2011:1200). The eligibility of plants commissioned after this date will end after 15 years of support (Chapter 2 § 7 Act No. 2011:1200). In any case, eligibility will cease at the end of 2035 at the latest (Chapter 2 § 11 no. 2 Act No. 2011:1200).	
International applicability	**International certificate trade**	According to the Swedish Energy Agency, Sweden and Norway introduced a common electricity certificate market on 1 January 2012. The producers of RES electricity receive certificates in their own country. These certificates can be traded on both the Swedish and Norwegian markets (Chapter 1 § 5 Act No. 2011:1200).
	Flexibility Mechanism	
Addressees	The quota obligation applies to • companies supplying electricity to the consumers, • electricity consumers who use electricity they have produced. The electricity consumed must exceed 60 MWh per year and have been produced in a plant with an installed capacity of more than 50 kW. • electricity consumers, for electricity they imported from or purchased on the Nordic electricity market, and • registered energy-intensive companies (Chapter 4 § 1 Act No. 2011:1200).	
Procedure	**Process flow**	• **Issue of electricity certificates.** ○ Applications must be directed to the supervising authority (Chapter 2 § 1 Act No. 2011:1200). ○ The supervising authority authorises the plant (Chapter 2 § 1 Act No. 2011:1200). ○ The electricity is measured and reported to the account management authority (Chapter 2 § 3 Act No. 2011:1200). ○ The account management authority assigns

		electricity certificates (Chapter 3 § 2 Act No. 2011:1200).
		• **Calculation of quota obligation.**
		  ○ Those obliged to satisfy a quota shall register with the supervising authority (Chapter 4 § 6 Act No. 2011:1200).
		  ○ Until 1 March each year, the obligated persons shall declare to the supervising authority the electricity sold. This quantity will be the basis for calculating the quota obligation (Chapter 4 § 3 Act No. 2011:1200)
		  ○ The obligated parties shall, by 1 April, possess the defined amount of electricity certificates to be invalidated (Chapter 4 § 2 Act No. 2011:1200).
		  ○ The account management authority invalidates the electricity certificates (Chapter 4 § 10 Act No. 2011:1200).
		• **Quota obligation fine.** If a producer fails to satisfy his quota obligation, he shall pay a fine (Chapter 6 § 1 Act No. 2011:1200).
		• **Obligation to pay a fee.** The registration and transfer of a certificate to the account management authority is subject to a fee (Chapter 6 § 7 Act No. 2011:1200).
		• **Appeal.** Appeals shall be made only against the above-mentioned measures, which are carried out by the supervising and monitoring authorities. Appeals shall be lodged with the general administrative court (Chapter 8 §§ 1-4 Act No. 2011:1200).

	Competent authority	The authorities in charge of the quota system are the Swedish Energy Agency, which monitors the procedure, and the Swedish transmission grid operator (svenska kraftnät), which manages the certificate

		accounts (§ 3 Regulation No. 2011:1480).
Distribution of costs	**State**	
	Consumers	According to the Energy Agency, the costs are borne by the consumers.
	Plant operator	
	Grid operator	
	European Union	
	Distribution mechanism	According to the Energy Agency, electricity suppliers pass on the costs arising from the quota obligation to the consumers by adding a surcharge to their services. Since the introduction of the Swedish-Norwegian common certificate market, the costs of the quota obligation have been shared by the electricity consumers in both countries.

Tax regulation mechanisms I (Reduced real estate tax)

Abbreviated form of legal source(s)	• Act No. 1984:1052	
Summary	Owners of power stations or, under certain conditions, owners of land on which a power plant is located shall pay an annual real estate tax depending on the value of the power plant (§§ 1, 3 par. 1 d) Act No. 1984:1052). This real estate tax does not differ for renewable and fossil energy sources, except for wind energy, which is subject to a reduced tax payment, and hydro-electricity, which is subject to a higher tax rate (§ 3 par. 1 d), e) and f) Act No. 1984:1052).	
Eligible technologies	**General information**	Tax privileges are granted to wind power only; hydro-electricity is subject to an increased tax rate (§ 3 par. 1 e) and f) Act No. 1984:1052).
	Wind energy	Eligible (§ 3 par. 1 f) Act No. 1984/1052).
	Solar energy	
	Geothermal energy	
	Biogas	
	Hydro-power	
	Biomass	
Amount	Plots on which a power plant is located are subject to a real estate tax of • 0.5 % of the value of the plant if the electricity is generated from renewable or fossil energy sources (§ 3 par. 1 d) Act No. 1984:1052).	

	• 0.2 % of the value of the plant if the electricity is generated from wind energy (§ 3 par. 1 f) Act No. 1984/1052). • 2.8 % of the value of a hydro-electric power station (§ 3 par. 1 e) Act No. 1984:1052).	
Addressees	Every person subject to real estate tax shall be entitled, if he/she owns a piece of land on which a wind power plant is located (§§ 2, 3 par. 1 f) Act No. 1984/1052).	
Procedure	**Process flow**	
	Competent authority	
Flexibility Mechanism		
Distribution of costs	**State**	As the state levies the real estate tax, it bears the costs arising from the tax privileges (§ 8 Act No. 1984:1052).
	Consumers	
	Plant operator	
	Grid operator	
	European Union	
	Distribution mechanism	

Tax regulation mechanisms II (Energy tax reduction)

Abbreviated form of legal source(s)	Act No. 1994:1776	
Summary	The state of Sweden levies a tax on the consumption of electricity; the persons liable to this tax are commercial electricity producers and suppliers (Chapters 11 §§ 1, 5 Act No. 1994:1776). Wind energy is not subject to this tax if it was generated by a non-commercial producer/ delivered by a non-commercial supplier (Chapter 11 § 2 No. 1 Act No. 1994:1776).	
Eligible technologies	**General information**	Only electricity from wind energy is eligible for tax privileges.
	Wind energy	Eligible.
	Solar energy	
	Geothermal energy	
	Biogas	
	Hydro-power	
	Biomass	
Amount	The energy tax is 0.5 öre per kilowatt hour (€ct 0.05 perkWh) (industrial use), 18.5 öre per kilowatt hour (€ct 2 per kWh) (rate for certain municipalities) or 28 öre per kilowatt hour (€ct 3 per kWh) (all other consumers) (Chapter 11 § 3 par. 1 Act No. 1994:1776). As of 2011, the tax rates are multiplied by a factor based on the difference between the applicable electricity price and the price as of June 2009 (Chapter 11 § 3 par. 2 Act No. 1994/1776). The non-commercial supply of electricity from wind energy is exempt from the tax (Chapter 11 § 2 no. 1 Act No. 1994:1776).	

Addressees	Every producer that supplies electricity on a non-commercial basis is eligible for tax exemption (Chapter 11 § 2 Act No. 1994:1776).	
Procedure	**Process flow**	
	Competent authority	
Flexibility Mechanism		
Distribution of costs	**State**	As the state levies the energy tax, it bears the costs arising from the tax privileges (Chapter 1 § 1 Act No. 1994:1776).
	Consumers	
	Plant operator	
	Grid operator	
	European Union	
	Distribution mechanism	

RES-E grid issues

Overview

Overview of grid issues	In Sweden, access of electricity from renewable sources to the grid is subject to the general provisions laid down in the Electricity Act. According to these statutory provisions, the grid operator shall hold a licence, which obliges him to connect electricity generation systems to the grid, transmit electricity and expand the grid. Renewable energy is not given priority.
Connection to the grid	The grid operator is statutorily obliged to connect electricity generation plants to the grid. Electricity from renewable sources is not given priority.
Use of the grid	Plant operators are statutorily entitled against the grid operator to use the grid. Electricity from renewable sources is not given priority.
Grid expansion	The grid operator is statutorily obliged to expand the grids; however, the plant operators are not entitled to an expansion. Electricity from renewable energy sources is not given priority.
Statutory provisions	• Electricity Act

Basic information on legal sources

Name of legal source **(original language)**	Ellag (1997:857)		
Full name			
Name (English)	Swedish Electricity Act		
Abbreviated form	Electricity Act		
Entry into force	01.01.1998		
Last amended on	01.06.2013		
Future amendments			
Purpose	This Act establishes provisions for electricity generation plants		
Relevance for renewable energy	The Act regulates the connection of renewable electricity plants, the distribution of electricity from renewable sources and the obligation to expand the grid.		

Link to full text of legal source (original language)	http://www.riksdagen.se/sv/Dokument-Lagar/Lagar/Svenskforfattningssamling/Ellag-1997857_sfs-1997-857/		
Link to full text of legal source (English)	*http://www.energimarknadsinspektionen.se/upload/ENGLISH/Electricity_Act.pdf* Please note: The English translation does not provide information on the latest amendment of the Act.		

Further information

Institution (name)	Website	Name of contact person (optional)	Telephone number (head office)	E-mail (optional)
Svenska Kraftnät – Grid operator	http://www.svk.se		+ 46 8 475 80 00	registrator@svk.se
Energimarknadsinspektionen (EMI) – Energy Markets Inspectorate	http://www.energimarknadsinspektionen.se		+46 16 16 27 00	registrator@ei.se

Grid issues

Connection to the grid

Abbreviated form of legal sources	• Electricity Act	
Overview	The holder of a "line network concession" (i.e. the grid operator) is obliged to connect renewable energy plants on reasonable terms unless there are special reasons (Chapter 3 § 6 par. 1; § 7 par. 1 Electricity Act).	
Procedure	**Process flow**	The detailed procedure is set out in the Grid Code. Applicants have to submit an application for connection to the grid operator (Chapter 4 § 12 Electricity Act). Both parties then sign a grid connection agreement. Disputes about the grid operator's obligation are settled by the Inspectorate upon request (Chapter 3 § 6 par. 2; § 7 par. 2 Electricity Act).
	Deadlines	The holder of a line network concession (i.e. the grid operator) is obliged to deal with applications for connection within a reasonable period of time (Chapter 4 § 11 Electricity Act). Furthermore, he shall develop a roadmap for the implementation of grid connection (Chapter 4 § 12 Electricity Act).
	Obligation to inform	The holder of a line network concession (i.e. the grid operator) is obliged to provide all information on his network tariff (including the terms and conditions for connection) on request within a reasonable period of time (Chapter 4 § 11 par. 1 and 2 Electricity Act).
Priority to renewable energy	( ) Priority to renewable energy	Renewable energy is not given priority. Plants shall be connected to the grid without certain plant operators being discriminated against (Chapter 3 § 6 par. 1; § 7 par. 1

(qualitative criteria)	(X) Non-discrimination	Electricity Act).
Capacity limits **(quantitative criteria)**	According to the Swedish Energy Markets Inspectorate, the grid operator is not obliged to connect plants to the grid if grid capacity is insufficient. This is one of the above-mentioned reasons for which the obligation to connect plants may be waived.	
Distribution of costs		
	State	
	Consumers	
	Grid operator	
	Plant operator	The plant operator bears the costs of connection by paying the so-called network tariff (Chapter 4 § 1 and Chapter 1 § 5 Electricity Act).
	European Union	
	Distribution mechanism	

Use of the grid

Abbreviated form of legal sources	• Electricity Act	
Overview	The holder of a line network concession (i.e. the grid operator) is obliged to transmit electricity on reasonable terms (Chapter 3 § 9 par. 1 Electricity Act).	
Procedure	**Procedure**	
	Deadlines	
	Obligation to inform	The holder of a line network concession (i.e. the grid operator) is obliged to publish all information on his network tariff (including the terms and conditions of use of the grid) (Chapter 4 § 11 par. 3 Electricity Act).
Priority to renewable energy **(qualitative criteria)**	( ) Priority to renewable energy (X) Non-discrimination	Renewable energy is not given priority. The conditions and fees for use of the grid shall be non-discriminatory (Chapter 1 § 5 in connection with Chapter 4 § 1 par. 2 Electricity Act).
Curtailment	The Swedish transmission grid operator Svenska Kraftnät may request a plant operator to increase or reduce the output of a plant to guarantee grid stability (Chapter 8 § 2 par. 1 Electricity Act). If a plant operator has to reduce the output of a plant, he will be compensated for the market value of the electricity (Chapter 8 § 2 par. 1 Electricity Act). If output reduction proves to be inefficient, the transmission grid operator may request the grid operator to interrupt the transmission of electricity to the electricity consumers.	
Distribution of costs		
	State	

	Consumers	
	Grid operator	
	Plant operator	The costs arising from the use of the grids for the transmission of electricity from renewable sources are borne by the plant operators, who are obliged to pay the so-called network tariff (Chapter 4 § 1 and Chapter 1 § 5 Electricity Act). Plants generating less than 1.5 MW are subject to a reduced tariff (Chapter 4 § 10 par. 1 Electricity Act).
	European Union	
	Distribution mechanism	

Grid expansion

Abbreviated form of legal source	Electricity Act	
Overview	In general, the grid operator is obliged to upgrade his grid if necessary (Chapter 3 § 1 Electricity Act). There is no law obliging the grid operator to extend the grid. However, such obligation may derive from the plant operator's entitlement to connection to the grid.	
Procedure	**Procedure**	
	Enforcement of claims	A plant operator's entitlement to connection to the grid (Chapter 3 § 6 par. 1 Electricity Act) may give him the right to claim the extension of the grid from the grid operator.
	Deadlines	
	Obligation to inform	
Regulatory incentives for grid expansion and innovation	At the moment, there are no regulatory instruments to encourage grid development.	
Distribution of costs		
	State	
	Consumers	
	Grid operator	

	Plant operator	According to the Energy Markets Inspectorate, the plant operator in question bears the costs of a grid expansion if the expansion is only to his benefit.
	European Union	
	Distribution mechanism	
Grid studies	There are several types of grid development studies in Sweden, for example by Energy Sweden, the Wind Power Association, the TSO or the Energy Market Inspectorate.	

RES-H&C support schemes

Summary of support schemes

Overview	In Sweden, tax exemptions are the main incentives to support renewable heating.
Summary of support schemes	• Tax reductions for households. Act No. 2009:194 sets rules for the tax-deduction of RES-related installation works in households. The installation of renewable energy devices and the replacement of conventional heating sources with renewable ones may be deducted from tax. • Energy and carbon dioxide taxes. In Sweden, energy and carbon dioxide taxes are levied on the supply, import and production of fossil fuels for heating purposes. Renewable energy sources are exempt from these taxes. • Nitrous oxide tax. The producers of heat are obliged to pay a tax according to their nitrous oxide emissions. Heat producers using renewable energy sources are exempt from this obligation.
Technologies	All renewable energy technologies are exempt from the tax obligations.
Statutory provisions	• Act No. 2009:194 (Lag om förfarandet vid skattereduktion för hushållsarbete - Act on the Tax-Deduction Process for Installation Works in Households) • Act No. 1994:1776 (Lag om skatt på energy - Act on the Energy Tax) • Act No. 1990:613 (Lag om miljöavgift på utsläpp av kväveoxider vid energiproduktion - Act on Environmental Charges on Nitrous Oxide Emissions from Energy Generation) • Act No. 2010:598 (Lag om hållbarhetskriterier för biodrivmedel och flytande biobränslen - Act on sustainability criteria for biofuels and bioliquids

Basic information on legal sources

Name of legal source (original language)	Lag (2009:194) om förfarandet vid skattereduktion för hushållsarbete	Lag (1994:1776) om skatt på energy	Lag (1990:613) om miljöavgift på utsläpp av kväveoxider vid energiproduktion	Lag (2010:598) om hållbarhetskriterier för biodrivmedel och flytande biobränslen
Full name				
Name (English)	Act (2009:194) on the Tax-Deduction Process for Installation Works in Households	Act (1994:1776) on the Energy Tax	Act (1990:613) on Environmental Charges on Nitrous Oxide Emissions from Energy Generation	Act (2010:598) on sustainability criteria for biofuels and bioliquids
Abbreviated form	Act No. 2009:194	Act No. 1994:1776	Act No. 1990:613	Act No. 2010:598
Entry into force	01.07.2009	01.01.1995	01.01.1992	01.10.2010
Last amended on	01.01.2012	01.07.2013	01.07.2013	01.11.2011
Future amendments				
Purpose	This act sets out rules for the tax deduction of installation works in households.	This act introduces a tax on energy consumption.	The act introduces a nitrous oxide tax.	The act contains sustainability criteria for biofuels and bioliquids.
Relevance for renewable energy	Among other measures, the purchase of small RES	Tax privileges for heating from	Tax privileges for heating from	The act concern renewable

	installations is eligible for the tax reduction.	renewable sources.	renewable sources.	energy sources only.
Link to full text of legal source (original language)	*http://www.riksdagen.se/sv/Dokument-Lagar/Lagar/Svenskforfattningssamling/Lag-2009194-om-forfarandet-_sfs-2009-194/*	http://www.riksdagen.se/sv/Dokument-Lagar/Lagar/Svenskforfattningssamling/Lag-19941776-om-skatt-pa-en_sfs-1994-1776/	*http://www.riksdagen.se/sv/Dokument-Lagar/Lagar/Svenskforfattningssamling/Lag-1990613-om-miljoavgift-_sfs-1990-613/?bet=1990:613*	http://www.riksdagen.se/sv/Dokument-Lagar/Lagar/Svenskforfattningssamling/Lag-2010598-om-hallbarhetsk_sfs-2010-598/
Link to full text of legal source (English)				

Further information

Institution (name)	Website	Name of contact person (optional)	Telephone number (head office)	E-mail (optional)
Energiemyndigheten – Swedish Energy Agency	http://www.energimyndigheten.se		+46 165 442 000	registrator@energimyndigheten.se
Boverket – Swedish National Board of Housing, Building and Planning	http://www.boverket.se		+46 455 353 000	registraturen@boverket.se
Naturvårdsverket – Swedish Environmental Protection Agency	http://www.naturvardsverket.se/		+46 10 698 10 00	registrator@swedishepa.se
Skatteverket – Swedish Tax Authority	http://www.skatteverket.se/		+46 771 567 567	

Support schemes

Tax regulation mechanism (Tax reductions for household works)

Abbreviated form of legal source(s)	• Act No. 2009:194	
Summary	Act No. 2009:194 establishes rules for the income tax deduction of installation works in households. Eligible measures are the installation of renewable energy devices and the replacement of conventional heating sources with renewable ones. Only the labour costs are deductible. The costs of materials and other expenses related to the installation are not eligible. There are two possible ways to benefit from the reduction. The person commissioning eligible installation works may deduce the eligible costs from his/her income tax at the beginning of the following year or he/she can apply for a provisional tax credit that the tax authority pays before the costs have to be covered. In the latter procedure, the amount of reduction paid will be offset against the income tax the eligible person has to pay at the beginning of the following year.	
Eligible technologies	**General information**	The website of the tax authority (Skatteverket) provides a list of examples of eligible installation works (http://www.skatteverket.se/privat/skatter/fastigheterbostad/husarbete/exempelparotarbete.4.58a1634211f85df4dce80009465.html). As for heating from renewable energy sources, only heat pumps and solar panels are eligible.
	Aerothermal	The installation or replacement of a heat pump is eligible for the tax allowance.
	Hydrothermal	The installation or replacement of heat pumps is eligible for the tax allowance.

	Biogas	
	Biomass	
	Geothermal energy	The installation or replacement of a heat pump is eligible for the tax allowance.
	Solar Thermal	The installation of or the replacement of conventional heating installations with solar panels is eligible for the tax allowance.
Amount	The amount of the tax reduction shall not exceed SEK 50 000 per year (approx. € 5,630) (§§ 7 and 17 Act No. 2009:194).	
Addressees	According to the tax authority, the person eligible for the tax reduction must reside in the house where the work was conducted or must own it as a summer cottage. Work at the house of a claimant's parents is also deductible as long as the claimant actually paid for the work conducted. In order to receive provisional tax credit, the claimant has to fully or partially own the house where his/her parents live.	

Procedure	**Process flow**	Tax reduction may be claimed in two ways:
		• In order to benefit from the regular tax allowance,
		  ◦ the claimant has to make a request for the allowance to the tax authority in writing by 31 January of the year following the tax year in which the work was paid for (§ 8 Act No. 2009:194).
		  ◦ The tax authority shall, without delay, decide on whether or not tax reduction is granted (§ 11 Act No. 2009:194).
		• In case of preliminary tax credit, the person who has commissioned the installation works must apply for the pre-payment of the tax credit to the tax authority. The authority

		then pays the credit. If afterwards the tax authority decides that the preliminary payment was too high, the recipient of the credit must pay back the surplus amount (§ 17 Act No. 2009:194). In both cases, the installation works must have been completed and the labour costs must have been paid prior to application for tax allowance/credit (§ 8 Act No. 2009:194).
	Competent authority	Tax authority (Skatteverket)
Flexibility Mechanism		
Distribution of costs	**State**	The costs of the tax allowance scheme are borne by the state.
	Consumers	
	Plant operator	
	Grid operator	
	European Union	
	Distribution mechanism	

Tax regulation mechanism (Energy and CO2-tax)

Abbreviated form of legal source(s)	• Act No. 1994:1776 • Act No. 2010:598	
Summary	In Sweden, energy and carbon dioxide taxes are levied on the supply, import and generation of fossil fuels for heating purposes. Renewable energy sources are exempt from these taxes.	
Eligible technologies	**General information**	All renewable energy generation technologies are eligible for tax exemption. Renewable energy sources other than biomass and biogas are not physical sources (fuels) used for generation of heating, so they are not covered under the energy tax. Biomass and biogas is explicitly excluded from the tax (Chapter 7 § 3 Act No. 1994:1776).
	Aerothermal	Eligible
	Hydrothermal	Eligible
	Biogas	Eligible. The exempt biogas must be certified with sustainability certification according to Chapter 3 § 1b Act No. 2010:598.
	Biomass	Eligible. The exempt biomass must be certified with sustainability certification according to Chapter 3 § 1b Act No. 2010:598.
	Geothermal energy	Eligible
	Solar Thermal	Eligible

Amount	The amount of subsidy is equal to the amount of taxes entitled persons are exempt from.	
Addressees	Heating from renewable sources is exempt from these taxes. Suppliers, importers and producers of heating generated from these products are exempt from paying the taxes (Chapter 4 § 1 Act No. 1994:1776).	
Procedure	**Process flow**	
	Competent authority	The Swedish tax authority (Skatteverket)
Flexibility Mechanism		
Distribution of costs	**State**	The costs of tax relief are borne by the state (Chapter 1 § 1 Act No. 1994:1776).
	Consumers	
	Plant operator	
	Grid operator	
	European Union	
	Distribution mechanism	

Tax regulation mechanism (Nitrous oxide tax)

Abbreviated form of legal source(s)	• Act No. 1990:613	
Summary	The producers of heat are obliged to pay a tax according to their nitrogen oxide emissions (§ 1 Act No. 1990:613). Heat producers using renewable energy sources are exempt from this obligation.	
Eligible technologies	**General information**	As renewable energy sources do not produce nitrogen oxide emissions, they are exempt from the tax.
	Aerothermal	Eligible
	Hydrothermal	Eligible
	Biogas	Eligible
	Biomass	Eligible
	Geothermal energy	Eligible
	Solar Thermal	Eligible
Amount	The amount of subsidy is equal to the amount of taxes entitled persons are exempt from. The fee is SEK 50 per full kilogram of nitrogen oxides (§ 5 Act No. 1990:613).	
Addressees	Renewable heating is exempt from these taxes. Producers of renewable heating products are exempt from the tax (§ 4 Act No. 1990:613).	

Procedure	**Process flow**	• The taxable event occurs when nitrogen oxides are emitted in a heat production unit (§ 4 Act No. 1990:613). • The accounting period for the levy is the calendar year (§ 8 Act No. 1990:613). • Persons subject to the levy must register with the Environmental Protection Agency (§ 8 Act No. 1990:613). • The declaration must be submitted to the Environmental Protection Agency by no later than 25 January of the year following the emissions (§ 10 Act No. 1990:613). • The levy must be paid by 1 October (§ 11 Act No. 1990:613).
	Competent authority	The Swedish Environmental Protection Agency (Naturvårdsverket) (§ 6 Act No. 1990:613).
Flexibility Mechanism		
Distribution of costs	**State**	The costs of the tax exemptions are borne by the state (§ 1 Act No. 1990:613).
	Consumers	
	Plant operator	
	Grid operator	
	European Union	
	Distribution mechanism	

RES-H&C grid issues

Overview

Overview of grid issues	According to the Energy Agency, the construction, use and development of district heating infrastructure in Sweden is not regulated by law. The Act on District Heating establishes rules for the operation of district heating networks, for example on the pricing of heat. It also sets out provisions on the connection of heating plants to the heating network.
Connection to the grid	Companies operating a district heating network are obliged to negotiate terms with the operator of a heating plant prior to connecting the plant to the network. Yet, this obligation does not imply that the companies are obliged to connect plants to their networks.
Use of the grid	
Grid development	
Statutory provisions	• Act No. 2008:263 (Fjärrvärmelag – Act on District Heating)

Basic information on legal sources

Name of legal source (original language)	Fjärrvärmelag (2008:263)		
Full name			
Name (English)	Act on District Heating		
Abbreviated form	Act No. 2008:263		
Entry into force	01.07.2008		
Last amended on	01.01.2012		
Future amendments			
Purpose	The Act sets out rules on the operation of district heating networks.		
Relevance for renewable energy			
Link to full text of legal source (original language)	*http://www.riksdagen.se/sv/Dokument-Lagar/Lagar/Svenskforfattningssamling/Fjarrvarmelag-2008263_sfs-2008-263/*		
Link to full text of legal source (English)			

Further information

Institution (name)	Website	Name of contact person (optional)	Telephone number (head office)	E-mail (optional)
Energiemyndigheten – Swedish Energy Agency	http://www.energimyndigheten.se		+46 165 442 000	registrator@energimyndigheten.se
Svensk Fjärrvärme – Swedish District Heating Association	http://www.svenskfjarrvarme.se/		+46 8 677 25 50	kontakt@svenskfjarrvarme.se

Grid issues

Connection to the grid

Abbreviated form of legal sources	• Act No. 2008:263	
Overview	Companies operating a district heating network are obliged to negotiate terms with the operator of a heat generation plant prior to connecting the plant to the network. This obligation, however, does not imply that the companies are obliged to connect plants to their networks (§ 37 Act No. 2008:263).	
Procedure	**Process flow**	An operator of a heat generation plant who wants to connect his plant to a district heating network in order to sell his heat to a district heating operator or use the network to distribute heat has to apply to a district heating company. The company is obliged to negotiate terms with the plant operator prior to the connection of the plant to the network (§ 37 Act No. 2008:263).
	Deadlines	
	Obligation to inform	If no agreement on network access can be reached, the district heating company is obliged to give reasons for denying access (§ 37 Act No. 2008:263).
Priority to renewable energy (qualitative criteria)	( ) Priority to renewable energy ( ) Non-discrimination	
Capacity limits (quantitative criteria)		
Distribution of costs		

	State	
	Consumers	
	Grid operator	
	Plant operator	
	European Union	
	Distribution mechanism	

RES-T support schemes

Summary of support schemes

Overview	The main incentive for renewable energy use in transport is a tax exemption for biofuels.
Summary of support schemes	• **Tax regulation mechanism.** Companies supplying, importing and producing fossil fuels are obliged to pay energy and carbon dioxide taxes. Biofuels are exempt from these taxes.
Technologies	The tax regulation mechanism applies to biofuels only.
Statutory provisions	• Act No. 1994:1776 (Lag om skatt på energy Energy Tax Act) • Act No. 2010:598 (Lag om hållbarhetskriterier för biodrivmedel och flytande biobränslen - Act on sustainability criteria for biofuels and bioliquids

Basic information on legal sources

Name of legal source (original language)	Lag (1994:1776) om skatt på energy	Lag (2010:598) om hållbarhetskriterier för biodrivmedel och flytande biobränslen	
Full name			
Name (English)	Energy Tax Act (1994:1776)	Act (2010:598) on sustainability criteria for biofuels and bioliquids	
Abbreviated form	Act No. 1994:1776	Act No. 2010:598	
Entry into force	01.01.1995	01.10.2010	
Last amended on	01.07.2013	01.11.2011	
Future amendments			
Purpose	This act introduces a tax on energy consumption.	The act contains sustainability criteria for biofuels and bioliquids.	
Relevance for renewable energy	Tax privileges for renewable heating.	The act concern renewable energy sources only.	
Link to full text of legal source (original language)	http://www.riksdagen.se/sv/Dokument-Lagar/Lagar/Svenskforfattningssamlin	http://www.riksdagen.se/sv/Dokument-Lagar/Lagar/Svenskforfattningssamli	

	g/Lag-19941776-om-skatt-pa-en_sfs-1994-1776/	ng/Lag-2010598-om-hallbarhetsk_sfs-2010-598/	
Link to full text of legal source (English)			

Further information

Institution (name)	Website	Name of contact person (optional)	Telephone number (head office)	E-mail (optional)
Energiemyndigheten – Swedish Energy Agency	http://www.energimyndigheten.se		+46 165 442 000	registrator@energimyndigheten.se
Skatteverket – Swedish Tax Authority	http://www.skatteverket.se/		+46 771 567 567	

Support schemes

Tax regulation mechanism (Energy and CO2-Tax)

Abbreviated form of legal source(s)	• Act No. 1994:1776 • Act No. 2010:598	
Summary	In Sweden, energy and carbon dioxide taxes are levied on the supply, import and production of fossil fuels. There are special tax deduction rules for biofuels.	
Eligible technologies	**General information**	Biofuels are eligible for tax exemption (Chapter 7 §§ 3a-3d Act No. 1994:1776).
	Biofuels	Eligible. The exempt biofuels must be certified with sustainability certification according to Chapter 3 § 1b Act No. 2010:598.
	Electricity	
	Hydrogen	
Amount	For low-percentage blend in petrol of ethanol and ethyl tertiary butyl ether (ETBE) produced from biomass the maximum deduction amounts to 89% from energy tax and 100% of CO2-tax on the share of fuel produced from biomass, but maximum of up to 5 percent by volume of the total amount of petrol (Chapter 7 § 3c Act No. 1994:1776). For low-percentage blend in diesel of rapeseed methyl ester (RME) and fatty acid methyl esters (FAME) produced from biomass the maximum deduction amounts to 84% from energy tax and 100% of CO2-tax on the share of fuel produced from biomass, but maximum of up to 5 percent by volume of the total amount of diesel (Chapter 7 § 3d Act No. 1994:1776). For hydrogenated vegetable and animal oils and fats (HVO) and other biofuels that have the same codes (CN codes) as diesel or	

	petrol the maximum deduction amounts to 100% from both energy and CO2-tax on the share of fuel produced from biomass, but maximum of up to 15 percent by volume of the total amount of fuel This deduction may be made in addition to the deduction for RME or FAME mentioned above (Chapter 7 § 3a and 3b Act No. 1994:1776). The amount of subsidy is equal to the amount of taxes eligible persons are exempt from. The energy and CO2-tax for petroleum amounts to range between SEK 0.039 (€ 0.0046) and 0.0641 (€ 0.0077) per litre. The energy and CO2-tax for diesel amounts to range between SEK 3,910 (€ 470) and 5,265 (€ 633) per m3 (Chapter 2 § 1 par. 1 No. 1, 2 and 3 Act No. 1994:1776).	
Addressees	Fuels from renewable sources are exempt from these taxes. Suppliers, importers and producers of renewable energy products are exempt from paying these taxes (Chapter 4 § 1 Act No. 1994:1776).	
Procedure	**Process flow**	
	Competent authority	The Swedish tax authority (Skatteverket)
Flexibility Mechanism		
Distribution of costs	**State**	The costs of tax relief are borne by the state (Chapter 1 § 1 Act No. 1994:1776).
	Consumers	
	Plant operator	
	Grid operator	
	European Union	

	Distribution mechanism	

Policies

Summary of policies

Overview	The following policies aim at promoting the development, installation and use of RES-installations. There is a specific training and certification regulation for the installers of RES plants and grants for research and development in the field of wind energy.
Summary of policies	• There is a specific training and certification regulation for the installers of RES plants. • There is a specific programme supporting research, development and demonstration in the field of wind energy.
Technologies	
Statutory provisions	• Regulation No. 2003:564 (Förordning om bidrag till åtgärder för en effektiv och miljöanpassad energiförsörjning – Regulation on Grants for Measures Promoting an Effective and Environmentally Sustainable Energy Supply) • Regulation No. 2013:3 (Boverkets föreskrifter och allmänna råd om certifiering av vissa installatörer samt om ackreditering av organ för sådan certifiering – Regulation and general recommendations regarding the certification of certain installers and the accrediting authority operating such certification

Basic information on legal sources

Name of legal source **(original language)**	Förordning (2003:564) om bidrag till åtgärder för en effektiv och miljöanpassad energiförsörjning	Boverkets föreskrifter och allmänna råd (2013:3) om certifiering av vissa installatörer samt om ackreditering av organ för sådan certifiering	
Full name			
Name (English)	Regulation No. 2003:564 on Grants for Measures Promoting an Effective and Environmentally Sustainable Energy Supply	Regulation and general recommendations (2013:3) regarding the certification of certain installers and the accrediting authority operating such certification	
Abbreviated form	Regulation No. 2003:564	Regulation No. 2013:3	
Entry into force	01.10.2003	21.03.2013	
Last amended on	01.07.2013		
Future amendments			
Purpose	The regulation sets out rules for grants for environmental sustainability projects, the purchase of technology, and development programmes prior to market entry.	The regulation prescribes general guidelines regarding the certification of RES installers and the accrediting authority operating such certification.	

Relevance for renewable energy	The regulation promotes research and development in the field of wind energy.	The regulation applies to renewable energy sources only.	
Link to full text of legal source (original language)	*http://www.riksdagen.se/sv/Dokument-Lagar/Lagar/Svenskforfattningssamling/Forordning-2003564-om-bidra_sfs-2003-564/*	https://rinfo.boverket.se/CIN/PDF/BFS-2013-3-CIN-1.pdf	
Link to full text of legal source (English)			

Further information

Institution (name)	Website	Name of contact person (optional)	Telephone number (head office)	E-mail (optional)
Energiemyndigheten – Swedish Energy Agency	http://www.energimyndigheten.se		+46 165 442 000	registrator@energimyndigheten.se
Miljödepartementet - Ministry of the Environment	http://www.regeringen.se/sb/d/1471		+46 8 405 10 00	

Policy categories

Training programmes for installers

Abbreviated form of legal source(s)	Regulation No. 2013:3
Description	The Swedish National Board of Housing, Building and Planning Regulation No. 2013:3 prescribes general guidelines regarding the certification of RES installers. Following certifications are available in Sweden: 1. **BP** for installers of small boilers and stoves using biomass **2.** **SC** for installers of PV-installations **3.** **SV** for installers of solar-thermal installations **4.** **VP** for installers of heat pumps and shallow geothermal plants (§ 2 Regulation No. 2013:3) An accredited certification bodies operating certification of installers shall provide training of installers (§ 3 Regulation No. 2013:3). This training shall include both theoretical and practical parts. It will provide the skills needed to design, install and maintain the RES plants (§ 4 Regulation No. 2013:3). Specific contents of the training are further specified in §§ 4-9 Regulation No. 2013:3. In order to obtain a certification an installer must prove: 1. General technical knowledge: a. obtained through specific technical training, or b. acquired through many years of occupation.

	c. Education requirement in paragraph 1 may also be satisfied by equivalent training in another country within the European Union or the European Economic Area (§ 11 Regulation No. 2013:3). 2. Practical experience: a. Obtained through work in the installation of relevant RES plants of at least two years during the last five years period (§ 12 Regulation No. 2013:3). An installer shall after undergoing specific training provided by an accredited certification body pass an examination, which shall include both a written and a practical component.(§ 14 Regulation No. 2013:3). Moreover the applicant's suitability for the task shall be supported by service certificate for the last three years of working period or corresponding certificate. The certifier must have or have had a close working relationship with the applicant (e.g. employer, client) (§ 15 Regulation No. 2013:3). The certification may be granted for a maximum period of five years (§ 16 Regulation No. 2013:3). •	
Addressees	RES plants installers	
Competent authority	Swedish National Board of Housing, Building and Planning and Swedac	
Further information	•	
Distribution of costs	**State**	
	Private Financing	In general, the trainees themselves have to bear the costs of training.
	European Union	

	Others	

Exemplary role of public authorities in accordance with Art. 13 Abs, 5 RES Directive

Abbreviated form of legal source(s)	
Description	With regard to the exemplary role of public authorities, there are several measures aiming at reducing energy demand. Apart from these energy efficiency measures, there are no policy programmes incentivising the use of RES in public authorities.
Addressees	
Competent authority	
Further information	

RD&D Policies (Grants for research and development in the field of wind energy)

Abbreviated form of legal source(s)	• Regulation No. 2003:564
Description	The grants are provided to enterprises in order to promote efficient and environmentally friendly energy supply, energy efficiency and to encourage the purchase of efficient energy technologies. Grants are awarded only until the funds are exhausted (§ 1 Regulation No. 2003:564). Following measures are eligible: • **Environmental sustainability projects** • **Environmental studies** • **Technology grants** • The amount of grant depends on the measure taken:**Environmental sustainability projects:** Eligible costs include only the additional costs for investment compared to the cost of a technically comparable investment that provides a lower level of environmental protection, or such additional costs necessary to implement the measures. o Grants for investments in energy efficiency may cover up to 60 % of the eligible costs. o Grants for investments to promote renewable energy may cover up to 45 % of the eligible costs. o Grants for the purchase of environmentally efficient transportation may cover up to 35 % of the eligible costs. o If these grants are provided to small and medium-sized enterprises, the above mentioned rates may be increased by respectively twenty and ten percentage points (§ 5 Regulation No. 2003:564). • **Environmental studies:** The costs eligible for environmental studies, the costs of the study. Grants may cover up to 50 % of these costs. If the grant is provided to small and medium enterprises, the aid intensity may be

	increased by twenty and ten percentage points (§ 6 Regulation No. 2003:564). • **Technology grants** may amount to a maximum of 50% of the additional costs. Technology grants apply as de minimis aid under the Commission's Regulation (EC) No 1998/2006 of 15 December 2006 and may only be subject to the restrictions under the Regulation (1988:764) on state aid forindustry (§ 7 Regulation No. 2003:564). •
Addressees	Enterprises (§ 1 Regulation No. 2003:564).
Competent authority	The competent authority is the Swedish Energy Agency (§ 8 Regulation No. 2003:564).
Further information	

RES-H building obligations

Abbreviated form of legal source(s)	
Description	In Sweden there is no national, regional or local legislation that requires the use of renewable heating sources in the building sector. The use of renewable energy in the building sector is incentivised through direct subsidies for the use of such sources and energy-saving measures in buildings.
Obligated entities	
Competent authority	
Further information	
Obligation on regional level	

Support of RES-H infrastructure

Abbreviated form of legal source(s)	
Description	The support of RES-H infrastructure in Sweden occurs only on the local level. The Ministry of the Environment encourages local authorities to support projects promoting the use of district heating. Currently there is a programme called "Delegationen för hållbara städer" – "Delegation for Sustainable Cities" – which promotes sustainable urban development through, inter alia, government funding for district heating infrastructure.
Addressees	
Competent authority	
Further information	Further information is available at: www.hallbarastader.gov.se/