



energy savings monitoring system development Austria

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22nd March 2023



The Austrian **Energy Efficiency Act** is currently in a revision process.

The following slides show the latest version.

1. Changes in article 7 evaluations

2. Changes in reporting

Overall national goal

218 Petajoule cumulative final energy savings from 2014-2020

Achievement

431 Petajoule cumulative final energy savings from 2014-2020

Other figures

- > Evaluation method: 78 % standardized calculation methodologies | 22 % individual calculation
- > But individual calculations are often used in industry => 68 % of energy savings volume
- > 0.55 % of energy savings were implemented to reduce energy poverty
- > Approximately 1 PJ of energy savings per year has been revoked through verification (downward trend)

Energy Efficiency Measures

Relevant policies to achieve article 7 targets

Policy Instrument

Contribution 2014-2020

> Energy Efficiency Obligation Scheme (2014- 2020)	33 %	}	Companies
> Subsidy Schemes			
▪ Residential buildings	15 %	}	Federal government & Federal provinces
▪ Domestic environmental support	12 %		
▪ Green electricity subsidies	2 %		
▪ Renovation booster	2 %		
▪ Climate mobility program			
▪ Climate and energy fund	4 %		
> Taxation		}	Federal government
▪ Energy taxes	31 %		
▪ Heavy goods vehicle toll (highway)	1 %		
▪ (new!) Carbon taxes (starting with 2022)			

Eligibility criteria of energy saving actions

Planned specifications

Materiality

- > Regulations (stricter than EU-law), Subsidies, taxes and duties, energy advice/consultation

Additionality

- > Defined through reference final energy consumption

(new!) No renewable supply (“final energy” instead of “sales to final customers”)

- > Production volumes of photovoltaics, solar thermal, wind and water power aren't eligible for energy efficiency
- > ... covered by Renewable Energy Directive and Renewable Energy Expansion Act



(new!) Avoid Lock-In-Effects of fossil devices

- > No ban on fossil-fueled devices, but no encouragement to install new ones either
- > Energy saving actions to reduce consumption are still allowed





Normalization

- > Adjustment for external factors of influence (e.g. weather, production volumes, user behavior)

Data source

- > Specifications on the quality data sources to be used

Documentation

- > Specifications on the minimum content of documentation

Standardized calculation methodologies

- > Catalogue of frequently implemented energy saving actions
- > Specification of calculation formula, standardized values or documentation requirements
=> Reduce burden and uncertainty

Individual evaluation

- > Specifications on the format and contents

Reference final energy consumption (baseline)

(new!) More precise definition

1 Normalized energy consumption in stock

- > Reduction of heating demand (e.g. renovations, heating systems)
- > Improving existing equipment (e.g. control systems, insulation of pipes)
- > Early replacement of equipment taking into account remaining lifetime

2 Market average

- > Construction of new facilities
- > Purchase of new equipment (e.g. household appliances) or vehicles

3 Minimum standard according to regulations

- > Construction of new buildings (building regulation)
- > If market average is not determinable (e.g. industrial facilities)

Final energy consumption of the most economic option, if 1-3 is not applicable

Standardized calculation methodologies

Covered energy saving actions

Awareness raising measures

- > Energy advice for households
- > Energy consulting for small and medium enterprises
- > Training on eco-driving

Building measures

- > Construction
 - > Deep Renovation
 - > Component refurbishment
- } Non-/residential buildings

Heating and hot water

- > Heating systems } Non-/residential buildings
- > Solar thermal systems in single family homes
- > Hot-water heat pump in residential buildings
- > Heating system circulation pumps
- > Insulation of pipes



Commercial facilities

- > Sealing of compressed air systems **(new!)**

Mobility

- > Alternative drive technologies
- > Charging infrastructure **(new!)**
- > Electric bicycles
- > Tire pressure of trucks
- > Home office **(new!)**
- > Carpooling **(new!)**



Other

- > Energy performance contracting

Removed standardized calculation methodology

Planned specifications



Fuel additives with cleansing effects

Light emitting diodes for households

> Theoretical market saturation

Water-saving fittings for households

> Theoretical market saturation

1. Changes in article 7 evaluations

2. Changes in reporting

Planned reporting infrastructure

Focus on alternative strategic measures & energy audits



E-Government: Access via authentication portal

Flexible design

- > Aggregated reporting
- > Overview on already reported energy saving actions
- > Reporting forms to collect detailed information on
 - Standardized calculation methodology
 - Individual evaluation
- > Progress visualization
- > Data export interface

The existing reporting platform must be revised

List of energy saving actions

Maßnahmen-UID	Jahr	Maßnahme	Bezeichnung	Adresse	Einsparung [kWh]	im Haushalt [kWh]	Meldung	Umsetzung	letzte Änderung	Aktiv		
96395679441616980	2015	Individuelle Bewer...	Mustermaßnahme 1	Musteradresse	8.000,0	2.666,7	21.12.2015	21.12.2015	21.12.2015, 00:00	<input type="radio"/> inaktiv		
96426119988773837	2015	Brennwertkessel f...	Mustermaßnahme 2	Musteradresse	73.010,4	73.010,4	11.01.2016	02.05.2015	11.01.2016, 00:00	<input checked="" type="radio"/> aktiv		
96426119988773848	2015	Brennwertkessel f...	Mustermaßnahme 3	Musteradresse	116.351,2	116.351,2	11.01.2016	01.05.2014	11.01.2016, 00:00	<input type="radio"/> inaktiv		
96429019108475442	2015	Flottenerneuerun...	Mustermaßnahme 4	Musteradresse	10.400,0	0,0	13.01.2016	16.05.2015	13.01.2016, 00:00	<input checked="" type="radio"/> aktiv		
96527588691804213	2016	Weißware (1.1.201...	Mustermaßnahme 5	Musteradresse	13.350,0	13.350,0	21.11.2016	11.11.2016	21.11.2016, 00:00	<input checked="" type="radio"/> aktiv		

Maßnahme anlegen
 Ausgleichsbetrag melden
 Übererfüllung übertragen
 Liste herunterladen

Available forms

Exemplary reporting form for condensing boilers

Reporting platform revision process

Requirement specifications



Context analysis

- > Natural and technical actors
- > Reporting processes

Functional requirements

- > Administration
- > Reporting
- > Background processes

Non-functional requirements

- > Usability
- > Security
- > Performance
- > ...



**Lastenheft zur Ausschreibung
der Applikation zum EEffG**



Standardized report is designed to allow single company or corporation notifications

Information on covered companies

- > Ownership between companies and sites
- > Energy audit or management system

Energy consumption data

- > Total energy consumption by energy carrier (production / input / output) and by equipment category
- > Net consumption = production + input – output

Potential energy saving actions

- > Useful waste heat (temperature, quantity)
- > Identified and implemented energy saving actions (category of use / energy saving potential / costs)

Executing energy service providers

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