ENVIRONMENTAL PRODUCT DECLARATION

SECURITRON

AQD6 POWER SUPPLY



6 Amp Dual Voltage Power Supply: converts 115VAC or 240VAC into 12 or 24VDC with over 90% efficiency, metal enclosure protects from tamper and accidental contact.

___CECURITRON

ASSA ABLOY

ASSA ABLOY is committed to providing products and services that are environmentally sound throughout the entire production process and the product lifecycle. Our unconditional aim is to make sustainability a central part of our business philosophy and culture, but even more important is the job of integrating sustainability into our business strategy. The employment of EPDs will help architects, designers and LEED-APs select environmentally preferable door openings. The Securitron AQD6 Power Supply EPD provides detailed requirements with which to evaluate the environmental and human health impacts related to producing our door openings. ASSA ABLOY will continue our efforts to protect the environment and health of our customers/end users and will utilize the EPD as one means to document those efforts.





ENVIRONMENTAL PRODUCT DECLARATION



Securitron AQD6 Power Supply According to EN 15804 and ISO 14025

Dual Recognition by UL Environment and Institut Bauen und Umwelt e.V.

This declaration is an environmental product declaration (EPD) in accordance with ISO 14025. EPDs rely on Life Cycle Assessment (LCA) to provide information on a number of environmental impacts of products over their life cycle. Exclusions: EPDs do not indicate that any environmental or social performance benchmarks are met, and there may be impacts that they do not encompass. LCAs do not typically address the site-specific environmental impacts of raw material extraction, nor are they meant to assess human health toxicity. EPDs can complement but cannot replace tools and certifications that are designed to address these impacts and/or set performance thresholds – e.g. Type 1 certifications, health assessments and declarations, environmental impact assessments, etc. Accuracy of Results: EPDs regularly rely on estimations of impacts, and the level of accuracy in estimation of effect differs for any particular product line and reported impact. Comparability: EPDs are not comparative assertions and are either not comparable or have limited comparability when they cover different life cycle stages, are based on different product category rules or are missing relevant environmental impacts. EPDs from different programs may not be comparable.



PROGRAM OPERATOR	UL Environment		
DECLARATION HOLDER	ASSA ABLOY / Hanchett Entry Systems, Inc / Securitron		
ULE DECLARATION NUMBER	4786545067.136.1		
IBU DECLRATION NUMBER	EPD-ASA-20150131-IBA1-EN		
DECLARED PRODUCT	Securitron AQD6 Power Supply		
REFERENCE PCR	Electronic Access Control System dependent expert committee (SVA	s, 11-2013 (PCR tested and approved by the A))	
DATE OF ISSUE	May 18, 2015		
PERIOD OF VALIDITY	5 years		
CONTENTS OF THE DECLARATION The PCR review was conducted by	General information Product / Product description LCA calculation rules LCA scenarios and further technical information LCA results References DIST. IBU – Institut Bauen und Umwelt e.V.		
The For Teview was conducted b	y.	PCR was approved by the Independent Expert Committee (SVA)	
The CEN Norm EN 15804 serves was independently verified in accounterwriters Laboratories		ubl	
☐ INTERNAL	⊠ EXTERNAL	Wade Stout	
This life cycle assessment was included with EN 15804 and the reference	lependently verified in accordance PCR by:	IBU – Institut Bauen und Umwelt e.V.	

Environment





1. General Information

Hanchett Entry Systems, Inc

Programme holder

IBU - Institut Bauen und Umwelt e.V.

Panoramastr. 1 10178 Berlin

Germany

Declaration number

EPD-ASA-20150131-IBA1-EN

This Declaration is based on the Product Category Rules:

Electronic Access Control Systems, 11-2013 (PCR tested and approved by the independent expert committee (SVA))

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Issue date

18.05.2015

Valid to

17.05.2020

Prof. Dr.-Ing. Horst J. Bossenmayer (President of Institut Bauen und Umwelt e.V.)

Dr.-Ing: Burkhart Lehmann (Managing Director IBU)

Securitron AQD6 Power Supply

Owner of the Declaration

Hanchett Entry Systems, Inc 10027 S 51st Street, Suite 102 Phoenix, AZ 85044

Declared product / Declared unit

This Declaration represents 1 model AQD6 Power Supply, with enclosure.

Scope:

The Life Cycle Assessment is based on data collected from the Hanchett Entry Systems Inc. The Securitron AQD6 Power Supply is assembled in USA. The electronic components, including PCB are produced in China.

The owner of the declaration shall be liable for the underlying information and evidence; the IBU shall not be liable with respect to manufacturer information, life cycle assessment data and evidences.

Verification

The CEN Standard EN 15804 serves as the core PCR Independent verification of the declaration and data according to ISO 14025

internally

externally



Dr. Wolfram Trinius (Independent verifier appointed by SVA)

2. Product

2.1 Product description

Product name: Securitron AQD6 Power Supply

Product characteristics: 6 Amp Dual Voltage Power Supply

- Converts 115VAC or 240VAC into 12 or 24VDC with over 90% efficiency
- Metal Enclosure protects from tamper and accidental contact
- UL Listed.

2.2 Application

The AQD6 is suitable for all 12 or 24VDC powered access control devices including card readers, locks, access control panels, and security cameras installed in almost any facility.

2.3 Technical Data

The table presents the technical properties of Securitron AQD6 Power Supply:

Technical data

i common data		
Name	Value	Unit
Input Voltage	115/230	VAC
Output Voltage	12/24	VDC

Name	Value	Unit
Output Current	6	Α
Battery Charge Current	0.7	Α

2.4 Placing on the market / Application rules

Compliance with US and Canadian Directives

- UL294 6th Edition Listed
- UL 603 Listed
- ULC S318 Listed
- UL1481 Listed
- RoHS Compliant

2.5 Delivery status

Each power supply is individually packaged in a cardboard box sized 14" x 14" x 4.75".

2.6 Base materials / Ancillary materials

The average composition of the Securitron AQD6 power supply is as following:

Component	Percentage in mass (%)
Copper	0.12
Plastics	0.01
Steel	86.81
Electronic	13.05



ASSA ABLOY

Component	Percentage in mass (%)	
Others	0.01	
Total	100.0	

2.7 Manufacture

The Securitron AQD6 Power Supply is assembled in USA. The electronic components, including PCB are produced in China.

2.8 Environment and health during manufacturing

The Management system of Lifesafety power is ISO 9001 and ISO 14001.

2.9 Product processing/Installation

AQD6 Power Supply is installed by trained product integrators or by the product end user. Installation instructions are included with each reader unit.

2.10 Packaging

The Power supply is packaged in cardboard.

Material	Value (%)
Cardboard/ Paper	100.0
Total	100.0

2.11 Condition of use

No auxiliary or consumable materials are incurred for maintenance and usage of the power supply. Repairs or replacement are not usually necessary. No cleaning efforts need to be taken into consideration.

2.12 Environment and health during use

There are no interactions between products, the environment and health.

2.13 Reference service life

The service life of the AQD6 is estimated to be 10 years.

2.14 Extraordinary effects

Fire

No danger to the environment can be anticipated during exposure to fire.

Water

No substances are used which have a negative impact on ecological water quality on contact by the device with water.

Mechanical destruction

No danger to the environment can be anticipated during mechanical destruction.

2.15 Re-use phase

During the reference service life the power supply can be disconnected and dismounted then remounted and attached elsewhere. The packaging and enclosure are recyclable. The Circuit boards are directed to an appropriate recycling center to prevent introduction to the solid waste cycle.

2.16 Disposal

The product can be mechanically dissembled to separate the different materials. 99.99% of the materials used are recyclable. The rest is disposed as a construction waste for landfill.

2.17 Further information

Securitron 10027 S 51st Street, Suite 102 Phoenix, AZ 85044

Tel: 800-624-5625 www.securitron.com

3. LCA: Calculation rules

3.1 Declared Unit

The declaration refers to the functional unit of 1 piece of AQD6 Power Supply as specified in Part B requirements on the EPD for Electronic Access Control Systems /IBU PCR Part B/.

Declared unit

200141.04 41111		
Name	Value	Unit
Declared unit	1	piece of AQD6 Power Supply
Mass (without packaging)	4.965	kg
Conversion factor to 1 kg	0.2014	-

3.2 System boundary

Type of the EPD: cradle to gate - with options
The following life cycle phases were considered for
Reader:

A1-A3 Production stage:

- A1 Raw material extraction and processing
- A2 Transport to the manufacturer and
- A3 Manufacturing.

Construction stage:

A4 - Transport from the gate to the site

A5 – Packaging waste processing

Use stage related to the operation of the building includes:

 B6 – Operational energy use (Energy consumption for lock operation)

End-of-life stage:

- C2 Transport to waste processing,
- C3 Waste processing for recycling and
- C4 Disposal (landfill).

These information modules include provision and transport of all materials, products, as well as energy and water provisions, waste processing up to the end-of-waste state or disposal of final residues.

Module D:

 Declaration of all benefits or recycling potential from EoL and A5

3.3 Estimates and assumptions

Use phase:



For the use phase, it is assumed that the power supply is used in the United States of America, thus an US electricity grid mix is considered within this stage.

EoL:

In the End-of-Life phase, for all the materials which can be recycled, a recycling scenario with 100% collection rate was assumed.

3.4 Cut-off criteria

In the assessment, all available data from the production process are considered, i.e. all raw materials used, auxiliary materials (e.g. lubricants), thermal energy consumption and electric power consumption - including material and energy flows contributing less than 1% of mass or energy (if available). In case a specific flow contributing less than 1% in mass or energy is not available, worst case assumption proxies are selected to represent the respective environmental impacts.

Impacts relating to the production of machines and facilities required during production are out of the scope of this assessment.

3.5 Background data

For life cycle modeling of the considered products, the GaBi 6 Software System for Life Cycle Engineering, developed by PE INTERNATIONAL AG, is used /GaBi 6 2013/. The GaBi-database contains consistent and documented datasets which are documented in the online GaBi-documentation /GaBi 6 2013D/. To ensure comparability of results in the LCA, the basic data of GaBi database were used for energy, transportation and auxiliary materials.

3.6 Data quality

The requirements for data quality and background data correspond to the specifications of the /IBU PCR PART A/.

PE INTERNATIONAL performed a variety of tests and validations during the commission of the present study

in order to ensure its quality of the present document and results. This obviously includes an extensive review of project-specific LCA models as well as the background data used.

The technological background of the collected data reflects the physical reality of the declared products. The datasets are complete and conform to the system boundaries and the criteria for the exclusion of inputs and outputs.

All relevant background datasets are taken from the GaBi 6 software database. The last revision of the used background data has taken place not longer than 10 years ago.

3.7 Period under review

The period under review is 2013/14 (12 month average).

3.8 Allocation

Regarding incineration, the software model for the waste incineration plant (WIP) is adapted according to the material composition and heating value of the combusted material. Following specific life cycle inventories for the WIP are considered:

- Waste incineration of plastic
- Waste incineration of paper
- Waste incineration of electronic scrap

Regarding the recycling material of metals, the metal parts in the EoL are declared as end-of-waste status. Thus, these materials are considered in module D. Specific information on allocation within the background data is given in the GaBi dataset documentation.

3.9 Comparability

Basically, a comparison or an evaluation of EPD data is only possible if all the data sets to be compared were created according to /EN 15804/ and the building context, respectively the product-specific characteristics of performance, are taken into account.

4. LCA: Scenarios and additional technical information

Installation into the building (A5)

motanation into the banding (7.0)		
Name	Value	Unit
Output substances following		
waste treatment on site Packaging	0.0544	kg
(paper and plastic)		

Reference service life

Name	Value	Unit
Reference service life	10	а

Operational energy use (B6)

operational energy use (Bo)		
Name	Value	Unit
Electricity consumption	7708.8	kWh
Days per year in use	365	Days
Hours per day in different modes	24	h
Power consumption on mode	144	W
Power consumption stand-by mode	60	W

End of life (C1-C4)

Name	Value	Unit
Collected separately Copper, Plastic Parts, Steel, Electronic	4.9650	kg
Collected as mixed construction	0.0005	kg

Name	Value	Unit
waste construction waste for		
landfilling		
Recycling Copper	0.0058	kg
Reuse plastic	0.0005	kg
Recycling Steel	4.3107	kg
Recycling Electronic	0.648	kg
Landfilling construction waste for landfill	0.0005	kg

Reuse, recovery and/or recycling potentials (D), relevant scenario information

Name	Value	Unit
Collected separately waste Card reader (including packaging)	5.0199	kg
Recycling Copper	0.12	%
Reuse Plastic Parts	0.01	%
Recycling Steel	85.87	%
Recycling Electronic	12.91	%
Reuse Paper Packaging	1.08	%
Loss Construction waste for landfilling (no recycling potential)	0.01	%



5. LCA: Results

Results shown below were calculated using CML 2000 – Apr. 2013 Methodology.

DESC	RIP	TION O	F THE	SYST	ЕМ В	DUND	ARY (X =	INCLU	DED IN	LCA	i; MNI	D = MOD	ULE N	OT DE	ECL <i>A</i>	ARED)	
PROE	DUCT	STAGE	ON PR	TRUCTI OCESS AGE			Uŝ	SE ST	TAGE				END OF L	BEY S'	EFITS AND OADS OND THE YSTEM JNDARYS			
Raw material supply	Transport	Manufacturing	Transport from the gate to the site	Assembly	Use	Maintenance	Repair	Replacement ¹⁾	Refurbishment ¹⁾	Operational energy use	Operational water	use De-construction	demolition	Waste processing	Disposal	Reuse-	~ ~ ~	
A1	A2	A3	A4	A5	B1	B2	В3	B4	4 B5	В6	В7	7 C	1 C2	C3	C4		D	
X	Χ	Х	Χ	Х	MND	MND	MND	MN	D MNE	X	MN	D MN	ID X	Х	Χ		Χ	
RESU	JLTS	S OF TH	IE LC	4 - EN\	/IRON	MENT	AL IM	PAC	CT: On	e piece	of S	ecurit	ron AQI	Pow	er Su	pply		
Param	eter	Pa	ırameteı	r	U	Unit		A3	A4	A5		B6	C2	C3	C	:4	D	
GWI	Р	Global wa	- 0		[kg CO ₂ -Eq.]		8.03E-		2.86E-01	7.71E-	02 5.1	8E+03	4.77E-03	1.05E-0	1 2.69	E-01	-1.31E+01	
ODF		Depletion stratosph	eric ozor	ne layer	[kg CFC11-Eq.]		2.27E-	-08	1.37E-12	3.53E-	13 1.7	79E-06	2.29E-14	7.18E-1	1 7.43	E-13	-1.41E-10	
AP		Acidification potential of land			[kg SO ₂ -Eq.]		4.63E-01		1.31E-03	1.76E-	05 1.7	75E+01	2.19E-05	4.95E-0	4 1.28	E-04	-1.04E-01	
EP					[kg (PO ₄) ³ - Eq.]		3.53E-02		2.99E-04	3.07E-	06 9.3	35E-01	4.99E-06	2.79E-0	5 3.07	E-05	-5.88E-03	
POC	CP tropospheric ozone photochemical oxidants			[kg Ethen Eq.]		3.20E-	-02 -	-4.23E-04	1.25E-	06 1.0	7E+00	-7.05E-06	2.94E-0	5 9.70	E-06	-7.93E-03		
ADP	ADPE Abi		tic depletion potential for non fossil resources			[kg Sb Eq.]		-03	1.08E-08	1.39E-	9 6.8	84E-04	1.80E-10	1.45E-0	8 8.34	E-08	-4.73E-03	
ADP	ADPE Abiotic			tential for	[MJ]		9.45E+02		3.95E+00	2.16E-	02 5.9	97E+04	6.59E-02	1.19E+0	0 2.14	E-01	-1.29E+02	
RESU	JLTS				SOUR	CE US	E: On	e pi	ece of	Securi	ron /	AQD6	Power S	Supply				
Param	eter		Parar	neter		Un	it A	1 - A3	A4	-	A5		C2	C3		C4	D	
PER	E		energy			[M.	J] 6.9	3E+0)1 -		-	-	-	-		-	-	
PER	M			rimary en aterial uti		[M	J] 0.00E		- 00		-	-	-	-		-	-	
PER	RT.	Total us	se of ren	ewable p	orimary	[M	J] 6.9	3E+0	1.56E	01 2.01	E-03	5.85E+0	3 2.60E-0	3 3.41E-	01 2.88	BE-02	-2.06E+00	
PENF	RE	Non rene		rimary er		[M.	IJ] 1.10E-)3 -		-	-	-	-		-	-	
PENF	RM	Non rene		rimary er utilization		[M	[MJ] 0.00		00 -		-	-	-	-		-	-	
PEN	RT	Total use	of non r		e primar			0E+0	3.97E-	+00 2.53	E-02	7.56E+0	4 6.61E-0	2 1.87E+	00 2.50	6E-01	-1.27E+02	
SM		Use	of secon	dary mat	terial [kg		,										0.00E+00	
RSI		Use of re Use of n		seconda wable se													0.00E+00	
FW	NRSF			fuels se of net fresh water			_	0.00E+00 0.00 3.44E-01 1.10										
						FLOV							ne piece					
Powe	r Sı	upply							<u> </u>						_	1		
Param			Parame			Jnit	A1 - A3		A4	A5		B6	C2	C3		:4	D	
HW	D			e dispose is waste			5.71E-0		.03E-06	1.74E-0		9E-02	1.51E-07	2.59E-0			4.00E-03	
A 11 P 4	VD						.99E-04	1.94E-0	3 2.4	1E+01	8.31E-06	6.03E-0	5.79	⊑- 02	-4.97E-01			
NHV		Padiosad	dispose				5 QQE A	2 F	10F 06	1 /19 = 0	3 6 2	25エリリ	8 65E 09	2 60⊑ 0	1 160	F-05	6.48= 0.4	
NHW RW	'D	Radioact	tive wast		ed [kg]	5.99E-0 0.00E+0		.19E-06 .00E+00	1.48E-0 0.00E+0			8.65E-08 0.00E+00	2.69E-0- 0.00E+0			6.48E-04 -	
RW CR MF	'D U R	Comp Mater	tive wast onents for rials for r	te dispos or re-use ecycling	ed [kg] kg] kg]	0.00E+0 0.00E+0	00 0.	.00E+00 .00E+00	0.00E+0 5.44E-0	0.00	0E+00 0E+00	0.00E+00 0.00E+00	0.00E+0 4.31E+0	0.001	E+00 E+00	6.48E-04 - -	
RW CR	D U R R	Compo Mater Materials	tive wast onents for ials for r for ener	te dispos or re-use ecycling	ed [[ery [kg] kg] kg] kg]	0.00E+0	00 0. 00 0. 00 0.	.00E+00	0.00E+0 5.44E-0 0.00E+0	0 0.00 2 0.00 0 0.00	0E+00 0E+00 0E+00	0.00E+00	0.00E+0 4.31E+0 0.00E+0	0.00E 0.00E 0.00E	E+00 E+00 E+00	1	



6. LCA: Interpretation

This chapter contains an interpretation of the Life Cycle Impact Assessment categories. Stated percentages in the whole interpretation are related to the overall life cycle, excluding credits (module D).

The production phase (modules A1-A3) contributes between 1% and 3% to the overall results for all the environmental impact assessment categories hereby considered, except for the abiotic depletion potential (ADPE). For this, the contribution from the production phase accounts for app. 88% - this impact category describes the reduction of the global amount of non-renewable raw materials; therefore, as expected, it is mainly related with the extraction of raw materials (A1).

Within the production phase, the main contribution for all the impact categories is the production of electronic components and steel, with app. 98%, mainly due to the energy consumption on this process. Steel accounts with app. 87% to the overall mass of the

product, therefore, the impacts are in line with the mass composition of the product. The environmental impacts for the transport (A2) have a negligible impact within this stage.

To reflect the use phase (module B6), the energy consumption was included and it has a major contribution for all the impact assessment categories considered - between 96% and 99%, with the exception of ADPE (12%). This is a result of 24 hours of operation in different modes per day and per 365 days in a year.

In the end-of-life phase, there are loads and benefits (module D, negative values) considered. The benefits are considered beyond the system boundaries and are declared for the recycling potential of the metals and for the credits from the incineration process (energy substitution).

7. Requisite evidence

Not applicable in this EPD.

8. References

Institut Bauen und Umwelt

Institut Bauen und Umwelt e.V., Berlin (pub.): Generation of Environmental Product Declarations (EPDs);

General principles

for the EPD range of Institut Bauen und Umwelt e.V. (IBU), 2013-04 www.bau-umwelt.de

IBU PCR Part A

IBU PCR Part A: Calculation Rules for the Life Cycle Assessment and Requirements on the Background Report. Institut Bauen und Umwelt e.V., Berlin (pub.). April 2013. www.bau-umwelt.de

IBU PCR Part B

IBU PCR Part B: Requirements on the EPD for Electronic Access Control Systems. Institut Bauen und Umwelt e.V., Berlin (pub.). www.bau-umwelt.com

ISO 14001

ISO 14001:2009-11: Environmental management systems - Requirements with guidance for use

ISO 14025

ISO 14025:2011-10: Environmental labels and declarations — Type III environmental declarations — Principles and procedures

ISO 9001

ISO 9001:2008: Quality management systems - Requirements

EN 15804

EN 15804: 2012+A1:2014: Sustainability of construction works — Environmental Product

Declarations — Core rules for the product category of construction products

GaBi 6 2013

GaBi 6 2013: Software-System and Database for Life Cycle Engineering. Copyright, TM. Stuttgart, Leinfelden-Echterdingen, 1992-2013.

GaBi 6 2013D

GaBi 6 2013D: Documentation of GaBi 6: Software-System and Database for Life Cycle Engineering. Copyright, TM. Stuttgart, Leinfelden-Echterdingen, 1992-2013. http://documentation.gabi-software.com/

RoHS Conformity:

RoHS Conformity: EN50581:2012 Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances

ULC S318

ULC S318: Standard for Power Supplies for Burglar Alarm Systems

UL 294

UL 294 6th Edition: Access control system units

UL 603

UL 603: Power supplies for use with burglar-alarm systems

UL1418

UL1418: Implosion-protected cathode-ray tubes for television-type appliances

9. Annex

Results shown below were calculated using TRACI Methodology.

DESC	RIP	TION O	F THE	SYST	ЕМ В	QUND	ARY (X =	INCLU	DED II	V LC	:A: I	MND	= MOD	ULE N	OT I	DECLA	RED)									
							(MND = MODULE NOT DECLARED) BENEFITS AN																	
DBOL	PRODUCT STAGE ON PROCESS					LICE CTACE																					
PROL	0001	STAGE		AGE		USE STAGE								ND OF L		OND THE YSTEM											
															BOU	INDARYS											
			he he					_	₽.	rgy	ē		_		ng												
rial	Ę	ring	Transport from the gate to the site	<u>></u>		<u>8</u>		Replacement ¹⁾	Refurbishment ¹⁾	Operational energy	Operational water		De-construction	Ę	Waste processing	_		- b =									
ate ply	ods	ctr	the	mb	Use	nar	air	- Luc	l H	a	ا ه	nse	tru	0g	900	OSS	se-	olin ntis									
Raw material supply	Transport	ınta	5	Assembly	ĭ	Maintenance	Repair	lace	Sign	ion :	use	S	-constructi	Transport	pr 6	Disposal	Reuse-	Recovery. Recycling potential									
Rav	F	Manufacturing	Лап	√an	J an	- Jan	/Jan	lan	∕lan	lan	/an	insp ate	Ä		⊠ ⊠	_	Sep	etu	eral	era		9-c	F	aste		" '	x x a
		-	Tra					<u> </u>	œ	ď	ŏ	•	Δ		Š												
A 1	A2	А3	A4	A5	B1	B2	В3	B4	4 B5	В6	E	B7	C1	C2	C3	C4	4	D									
Х	Χ	Х	Х	Χ	MND	MND	MND	MN	ID MNI	D X	М	IND	MND	X	Х	Х		Х									
RESU	JLTS	OF TH	IE LC/	4 - EN	VIRON	MENT	AL IM	PAC	CT: On	e piec	e of	Sec	uritro	on AQE	6 Pow	er S	Supply										
Param	eter	P	aramete	r	,	Unit	A1 -	А3	A4	A!	,	В	6	C2	С3		C4	D									
GWI	P	Global w	varming p	otential	[kg C	O ₂ -Eq.]	8.03E	+01	2.86E-0	1 7.71E	-02	5.18E	E+03 4	1.77E-03	1.05E-0	01 2.	.69E-01	-1.31E+01									
ODF		Depletio			g.] 2.42E-08		1.46E-1			1.91		2.43E-14	7.64E-11		.90E-13	-2.78E-10											
		stratospl Acidification	heric ozo	1		-	. 00																				
AP		Acidilication	' [kg S	SO ₂ -Eq.]	4.70E-01		1.71E-0	3 2.13E	-05	1.63E	E+01 2	2.86E-05	4.68E-04		.64E-04	-9.92E-02											
EP	Eutrophication potential				[kg N-eq.]		3.08E-02		1.21E-0	4 1.23E	1.23E-06 8.0		E-01 2	-01 2.02E-06		05 1.	.35E-05	-3.40E-03									
Smo	Smog Ground-level smog formation potential				[kg O ₃ -eq.]		5.69E	+00	3.53E-0	2 4.97E	-04 1.39		E+02	5.88E-04	4.24E-03		.26E-03	-1.06E+00									
Resour	Resources [I							+01	5.69E-0	2.53E-03		3.52E	2E+03 9.48E-03		8.49E-02		.06E-02	-2.36E+00									
RESU	JLTS	OF TH	IE LC/	A - RES	SOUR	CE US	E: On	e pi	ece of	Secur	itron	ı AC	D6 P	ower S	upply												
Paran	Parameter Parameter							A1 - A3				В6			СЗ												
· u.u.	iletei		Parar	neter		Unit	: A1	- A3	A4	<i>F</i>	\ 5	E	B6	C2	C3		C4	D									
PE		Renew	able prir	mary ene	ergy as	Unit [MJ]		- A3 E+01		-	. 5	E	B6 -	C2 -	C3		C4	D -									
PEI	RE			mary ene		[MJ]	6.93	E+01	1 -	4	.5 -	I	B6 -	C2 -	- C3		C4 -	- D									
	RE	Rene	vable prin energy ewable prin ees as ma	mary ene carrier rimary er aterial ut	nergy		6.93		1 -	4	.5 -	ŀ	- -	- -	- -		- -	- -									
PEI	RE RM	Rene resource Total us	vable pring energy ewable prices as masse of ren	mary ene carrier rimary er aterial ut ewable p	nergy ilization orimary	[MJ]	6.93	E+01) -		-		-	- - 2.60E-03	-	01 2	-	- - -2.06E+00									
PEI PEI	RE RM RT	Rene resource Total us	vable prir energy ewable prir ees as ma se of ren energy re	mary ener carrier rimary er aterial ut ewable pesources	nergy ilization orimary	[MJ]	0.00	SE+01 SE+00) - 1 1.56E-		-		-	-	-	01 2	-	-									
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PEI PEF PEN PEN SI	RE RM RT IRE IRM IRT	Rene resource Total us Non rene Non rene r Total prim Use	energy researched by a control of the control of th	mary energian carrier rimary energian ut ewable pesources rimary e carrier rimary e utilization on renever gy resoudary ma	nergy illization primary s nergy as nergy as n wable rces terial	[MJ] [MJ] [MJ] [MJ] [MJ]	6.93 0.00 6.93 1.10 0.00 1.10 4.20	BE+00 BE+00 BE+03 BE+03 BE+03 BE+03	1 1.56E- 3 - 0 0 - 3 3.97E+ 0.00E+	01 2.01	E-03 - E-02 E+00	7.56 0.00	- - 5E+03 - - - 5E+04	2.60E-03 - - 6.61E-02	3.41E- - - 1.87E+ 0.00E+	·00 2	- 88E-02 - - 56E-01	-2.06E+00 - - -1.27E+02 0.00E+00									
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PEI PEN PEN PEN SI RS NR: FV	RE RM RT IRE RM IRT	Rene resource Total us Non rene Non rene Total prim Use Use of n Use OF Th	vable pringer energy rewable pringer energy ewable pringer energy ewable pringer energy ener	mary energy ener	nergy ilization primary s nergy as nergy as nerg	[MJ] [MJ] [MJ]	6.93 0.00 6.93 1.10 0.00 1.10 4.20 0.00 0.00 3.44	E+00 E+00 E+03 E+03 E+03 E+03 E+03 E+00 E+00	1 1.56E- 3 - 0 0 - 3 3.97E+ 0.00E+ 0.00E+ 1.10E- (ASTE	01 2.01 -00 2.53 -00 0.00 -00 0.00 -00 0.00 CATE	E-03 E-02 E+00 E+00 E-04	7.566 0.000 0.000 2.666		2.60E-03 - - 6.61E-02 0.00E+00 0.00E+00 1.83E-06	3.41E- - - 1.87E+ 0.00E+ 0.00E+ 8.43E- of Sec	-00 2 -00 0. -00 0. -00 0. 04 1	- .88E-02 - .56E-01 .00E+00 .00E+00	-2.06E+00 -1.27E+02 0.00E+00 0.00E+00 0.00E+00 -3.70E-02									
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PEI PEN PEN PEN RS RS RESU Param HW NHW RW CR	RE RRM RT RRT RRM RRT RRM RRT VV D D U U D U D U D U D D U D D	Rene resource Total use Non rene Total prim Use Use of n Use of rene Use of rene Use of rene Rene Rene Rene Rene Rene Rene Rene	wable pringer energy rewable pringer energy ener	mary energy ener	nergy ilization primary nergy as nergy	[MJ] [MJ] [MJ] [MJ] [MJ] [MJ] [MJ]	6.93 0.00 6.93 1.10 0.00 1.10 0.00 3.44 VS AN Unit [kg] [kg] [kg]	E+01 E+02 E+03 E+03 E+00 E+03 E+00 A' 5.7 1.44 5.9 0.0	1 1.56E- 3 3.97E+ 0.00E+ 0.00E+ 1.10E- 4ASTE 1-A3 11E-02 9.8E+00 4.9E-02 5.00E+00 0.0	01 2.01 -00 2.53 -00 0.00 -00 0.00 -00 0.00 CATE A4 -03E-06 -99E-04 -19E-06 -00E+00	E-03 E-02 E+00 E+00 E+00 A5	7.56 0.00 0.00 2.66 3.66 3.60 3.60 3.60 3.60 3.60 3.60 3		2.60E-03 - 6.61E-02 0.00E+00 0.00E+00 1.83E-06 2 piece	3.41E 1.87E+ 0.00E+ 0.00E+ 8.43E- of Sec 07 2.59 06 6.03 08 2.69 -00 0.00E	000 2 2 000 0.00 0.00 0.00 0.00 0.00 0.		-2.06E+00 -1.27E+02 0.00E+00 0.00E+00 0.00E+00 -3.70E-02 D 4.00E-03 -4.97E-01 6.48E-04 0 -									
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PEI PEN PEN PEN SI RS NR: FV RESU Param HWW NHW RW GR ME	RE RRM RT RT RM IRT IRT VV D D U R R	Rene resource Total use Non rene Total prim Use Use of n Use OF The pply His Non Ra	vable printered vable vable printered vable	mary energy ener	nergy ilization orimary ilization orimary in nergy as ner	[MJ] [MJ] [MJ] [MJ] [MJ] [MJ] [MJ] [MJ]	6.93 0.00 6.93 1.10 0.00 1.10 0.00 3.44 VS ANI [kg] [kg] [kg] [kg] [kg]	E+010 E+02 E+03 E+03 E+03 E+00 E+00 DE+00	1 1.56E- 3 - 1 1.56E- 3 3.97E+ 0.00E+ 0.00E+ 1.10E- ASTE 1-A3 1E-02 9.8E+00 4.9E-02 5.0E+00 0.0E+00 0.	01 2.01 00 2.53 00 0.00 00 0.00 00 0.00 CATE A4 03E-06 99E-04 19E-06 00E+00 00E+00 00E+00	E-03 E-02 E+00 E+00 E-04 A5	7.56 0.00 0.00 2.66 1-03 2-06 1-03 1-00 1-00 1-00 1-00 1-00 1-00 1-00		2.60E-03 - 2.60E-03 - 6.61E-02 0.00E+00 0.00E+00 0.00E+00 1.83E-06 2 piece C2 02 1.51E- 01 8.31E- 00 8.65E- 00 0.00E+ 00 0.00E+ 00 0.00E+ 00 0.00E+ 00 0.00E+	3.41E- 1.87E+ 0.00E+ 0.00E+ 0.00E+ 8.43E- 07 2.59 06 6.03 08 2.69 00 0.00E 00 4.31E	00 2 00 0.00 0.00 0.00 0.00 0.00 0.00 0											
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