Table 15. Ecoreport results for Multi-Si module (per kWh)

Version 3.06 VHK for European Commission 2011,
modified by IZM for european commission 2014

Document subject to a legal notice (see below)

ECO-DESIGN OF ENERGY-RELATED PRODUCTS

EcoReport 2014: OUTPUTS

Assessment of Environmental Impact

Life Cycle Impact (per unit) of Multi Si panel (1 kWh)

Nr	Life cycle Impact per product:	Reference year	Author
0	Multi Si panel (1 kWh)	2014	Vito

	Life Cycle phases -->		PRODUCTION			DISTRI-	USE	END-OF-LIFE			TOTAL
	Resources Use and Emissions		Material	Manuf.	Total	BUTION		Disposal	Recycl.	Stock	
	Materials	**unit**									
1	Bulk Plastics	g			**8.83E-02**		**8.83E-04**	4.90E-02	4.01E-02	0.00E+00	**0.00E+00**
2	TecPlastics	g			**7.05E-02**		**7.05E-04**	3.92E-02	3.20E-02	0.00E+00	**0.00E+00**
3	Ferro	g			**0.00E+00**		**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	**0.00E+00**
4	Non-ferro	g			**5.32E-01**		**5.32E-03**	2.69E-02	5.11E-01	0.00E+00	**0.00E+00**
5	Coating	g			**0.00E+00**		**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	**0.00E+00**
6	Electronics	g			**6.72E-04**		**6.72E-06**	3.33E-04	3.46E-04	0.00E+00	**0.00E+00**
7	Misc.	g			**0.00E+00**		**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	**0.00E+00**
8	Extra	g			**2.50E+00**		**0.00E+00**	9.85E-01	1.54E+00	0.00E+00	**-2.50E-02**
9	Auxiliaries	g			**0.00E+00**		**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	**0.00E+00**
10	Refrigerant	g			**0.00E+00**		**0.00E+00**	0.00E+00	0.00E+00	0.00E+00	**0.00E+00**
	Total weight	g			**3.19E+00**		**6.92E-03**	1.10E+00	2.12E+00	0.00E+00	**-2.50E-02**
	Other Resources & Waste							debet	see note! credit		
11	Total Energy (GER)	MJ	6.40E-01	2.45E-02	**6.65E-01**	**1.69E-01**	**6.40E-03**	1.48E-02	-1.71E-01		**6.84E-01**
12	of which, electricity (in primary MJ)	MJ	4.59E-03	8.78E-03	**1.34E-02**	**1.36E-04**	**4.59E-05**	0.00E+00	-7.44E-04		**1.28E-02**
13	Water (process)	ltr	3.18E+00	1.51E-04	**3.18E+00**	**0.00E+00**	**3.18E-02**	0.00E+00	-7.87E-01		**2.43E+00**
14	Water (cooling)	ltr	2.23E-02	4.05E-03	**2.63E-02**	**0.00E+00**	**2.23E-04**	0.00E+00	-3.47E-03		**2.31E-02**
15	Waste, non-haz./landfill	g	4.81E+00	6.48E-02	**4.87E+00**	**8.37E-02**	**4.81E-02**	3.05E-01	-1.21E+00		**4.10E+00**
16	Waste, hazardous/incinerated	g	4.19E-02	1.48E-05	**4.19E-02**	**1.66E-03**	**4.19E-04**	0.00E+00	-1.03E-02		**3.37E-02**
	Emissions (Air)										
17	Greenhouse Gases in GWP100	kg CO2 eq.	4.68E-02	1.27E-03	**4.81E-02**	**1.30E-02**	**4.68E-04**	8.39E-05	-1.23E-02		**4.94E-02**
18	Acidification, emissions	g SO2 eq.	3.87E-01	5.22E-03	**3.92E-01**	**4.40E-02**	**3.87E-03**	1.34E-03	-1.01E-01		**3.40E-01**
19	Volatile Organic Compounds (VOC)	g	7.61E-03	6.68E-05	**7.68E-03**	**2.13E-03**	**7.61E-05**	5.47E-07	-1.39E-03		**8.49E-03**
20	Persistent Organic Pollutants (POP)	ng i-Teq	1.36E-02	5.83E-04	**1.41E-02**	**4.73E-04**	**1.36E-04**	2.78E-05	-3.71E-03		**1.11E-02**
21	Heavy Metals	mg Ni eq.	1.04E-01	1.71E-03	**1.05E-01**	**4.26E-03**	**1.04E-03**	7.67E-04	-2.60E-02		**8.53E-02**
22	PAHs	mg Ni eq.	5.66E-02	1.64E-04	**5.67E-02**	**3.07E-03**	**5.66E-04**	0.00E+00	-2.07E-02		**3.97E-02**
23	Particulate Matter (PM, dust)	g	5.09E-02	7.46E-04	**5.17E-02**	**5.35E-02**	**5.09E-04**	1.50E-03	-1.37E-02		**9.35E-02**
	Emissions (Water)										
24	Heavy Metals	mg Hg/20	3.86E-02	8.99E-05	**3.87E-02**	**1.31E-04**	**3.86E-04**	4.98E-05	-1.20E-02		**2.72E-02**
25	Eutrophication	g PO4	1.70E-02	1.59E-04	**1.72E-02**	**2.22E-06**	**1.70E-04**	2.17E-03	-4.19E-03		**1.53E-02**