

Operational Review of the National Television and Computer Recycling Scheme

Further information on possible enhancements

For consultation

23 April 2015

Introduction

An operational review of the National Television and Computer Recycling Scheme (the scheme) was initiated in September 2014 by Minister for the Environment, the Hon Greg Hunt MP.

A review paper was released for consultation in November 2014. 85 submissions were received. The review and submissions are available on the Department of the Environment's web site at <http://www.environment.gov.au/protection/national-waste-policy/television-and-computer-recycling-scheme/review> .

The Department of the Environment is now preparing a Regulatory Impact Statement (RIS) to support a decision on the matters considered through the review. The information in this paper has been developed to inform the development of the RIS and is provided for consultation regarding the costing assumptions and estimation of the change in regulatory burden.

The three options presented in this paper are the final options for consideration in the RIS. They represent a refinement of the target options and other proposals presented in the November 2014 review paper, following feedback from stakeholders during the national consultation process.

Option 1 is a 'no-change' option and provides a baseline against which the impacts of any regulatory change can be measured. Options 2 and 3 are regulatory change options designed to address issues discussed in the review paper, while also reducing cost to industry over time. They include revised target trajectories, which are based on those presented in the review paper but with smaller increases in 2015–16, and other amendments to make the scheme fairer for television and computer companies and to underpin a high standard of recycling and material recovery.

Interested stakeholders are invited to submit views on the information provided in this paper, particularly the information on costing and change in regulatory burden, no later than close of business Thursday 7 May, to:

The Director
Product Stewardship Regulator Section
Department of the Environment
ewaste@environment.gov.au

Further information on the scheme is available at www.environment.gov.au/ewaste .

Options for regulatory impact analysis

The three options below are the final options for consideration in the RIS. They represent a refinement of the target options and other proposals presented in the November 2014 review paper, following feedback from stakeholders during the national consultation process.

Regulatory changes under the three options are:

- Option 1
 - No regulatory change.
- Option 2
 - Revised target trajectory starting at 44% of waste arising in 2015–16
 - Updated conversion factors for some products applying to the 2015–16 target period (i.e. applying to imports made in 2014–15)
 - Updated product codes and conversion factors for some products applying from the 2016–17 target period (i.e. applying to imports made from 1 July 2015)
 - Updated waste arising scaling factors for IT products from 1 July 2015:
 - : 0.8 for computers (products listed in Part 2 of the relevant schedule)
 - : 0.88 for printers and computer parts and peripherals (products listed in Parts 3 and 4 of the relevant schedule)
 - Use of Australian Standard 5377 for recycling mandatory from 1 July 2016
 - Settlement date for target (import) data of 31 October.
- Option 3
 - Revised target trajectory starting at 50% of waste arising in 2015–16
 - Updated conversion factors for some products applying to the 2015–16 target period (i.e. applying to imports made in 2014–15)
 - Updated product codes and conversion factors for some products applying from the 2016–17 target period (i.e. applying to imports made from 1 July 2015)
 - Updated waste arising scaling factors for IT products from 1 July 2015:
 - : 0.8 for computers, printers and computer parts and peripherals (products listed in Parts 2, 3 and 4 of the relevant schedule)
 - Use of Australian Standard 5377 for recycling mandatory from 1 July 2016
 - Settlement date for target (import) data of 31 October.

Projected scheme recycling targets under Options 1, 2 and 3

Table 1 below presents the percentage target trajectories and the projected waste arising and scheme recycling targets for each option, over a twenty year period. Projections for waste arising were redeveloped in early 2015 based on updated assumptions, and differ for each option based on the applicable regulatory settings. The total recycling projected to occur under each option is also shown, indicating that the regulatory changes under Options 2 and 3 will result in less recycling occurring than would occur under Option 1, with the least recycling occurring under Option 3.

Table 1: Percentage targets and projected waste arising and scheme targets for Options 1, 2 and 3

Year	Option 1 Schedule 1B Scaling factor 0.9 for all products			Option 2 Schedules 1C, 1D Scaling factors 0.9/0.8/0.88			Option 3 Schedules 1C, 1D Scaling factors 0.9/0.8/0.8		
	Projected waste arising (tonnes)	Percentage target	Projected scheme target (tonnes)	Projected waste arising (tonnes)	Percentage target	Projected scheme target (tonnes)	Projected waste arising (tonnes)	Percentage target	Projected scheme target (tonnes)
2015-16	116,663	37	43,165	109,430	44	48,149	106,453	50	53,226
2016-17	113,766	40	45,506	104,639	52	54,412	102,098	58	59,217
2017-18	115,422	48	55,403	103,841	56	58,151	101,592	60	60,955
2018-19	117,881	56	66,013	105,747	60	63,448	103,403	62	64,110
2019-20	122,104	64	78,147	108,653	64	69,538	106,200	64	67,968
2020-21	124,200	72	89,424	109,651	68	74,563	107,173	66	70,734
2021-22	126,468	80	101,174	110,770	70	77,539	108,262	68	73,618
2022-23	127,399	80	101,919	110,902	72	79,850	108,417	70	75,892
2023-24	129,305	80	103,444	112,037	74	82,907	109,534	72	78,864
2024-25	133,265	80	106,612	115,225	76	87,571	112,701	73	82,272
2025-26	135,458	80	108,366	117,011	80	93,609	114,462	74	84,702
2026-27	137,915	80	110,332	119,139	80	95,311	116,561	75	87,421
2027-28	137,891	80	110,313	119,190	80	95,352	116,606	76	88,620
2028-29	139,823	80	111,858	121,004	80	96,803	118,416	77	91,180
2029-30	141,715	80	113,372	122,782	80	98,225	120,192	78	93,750
2030-31	144,121	80	115,297	124,925	80	99,940	122,312	80	97,850
2031-32	146,975	80	117,580	127,440	80	101,952	124,801	80	99,840
2032-33	155,438	80	124,350	134,991	80	107,993	132,332	80	105,865
2033-34	156,881	80	125,505	136,249	80	108,999	133,569	80	106,855
2034-35	158,210	80	126,568	137,407	80	109,926	134,703	80	107,762
2035-36	154,826	80	123,861	134,282	80	107,426	131,520	80	105,216
Total 2015-16 to 2035-36 (tonnes)			2,078,210			1,811,664			1,755,918

Cost assumptions

Average costs to industry over the first three years of the scheme have been estimated at \$1,120 per tonne of recycling in 2012–13, \$1,080 per tonne in 2013–14 and \$950 per tonne in 2014–15. Two industry cost models will be considered in the RIS:

- Model A: Assumes average costs to industry will remain at \$950 per tonne. Some factors may tend to reduce costs, such as economies of scale in recycling and transport, while other factors may tend to increase costs, such as a greater marginal effort required to collect e-waste as targets increase over time.
- Model B assumes costs will continue to decline for two years before stabilising at between \$760 and \$800 per tonne from 2017–18. This model assumes an increasing rebate from recycling non-glass e-waste relative to the cost of recycling.

The cost of mandating Australian Standard 5377 has been estimated following consultation with recyclers. Estimates provided by recyclers ranged from \$6,000 to \$10,000 to achieve certification under the AS 5377 standard and around \$2,000 to \$4,000 per year to maintain it.

Based on these preliminary costings and an estimate and categorisation of facility sizes across Australia, costing analysis has been undertaken based on:

- 18 small recycling facilities, 15 large recycling facilities and 5 co-regulatory arrangements
- Initial certification costs of \$6,000 for a small facility and \$10,000 for a large facility (incurred in the 2015-16 financial year)
- Recurring compliance costs of \$2,000 per year for a small facility and \$4,000 per year for a large one
- Offsetting costs to parties operating co-regulatory arrangements involving avoided costs associated with audit costs of around \$70,000 per arrangement incurred on a three year audit cycle (assumed to be spread evenly over the forecast period).

It is assumed that co-regulatory arrangement administrators and liable parties would each incur additional costs to adjust to revised target trajectories under Options 2 and 3. These costs are estimated as:

- A one-off cost to each of the five co-regulatory arrangements of \$6,575 (100 hours staff time)
- A one-off cost to each of the 135 liable parties of \$524 (8 hours of staff time)

It is assumed that the implementation of a 31 October settlement date for target data under Options 2 and 3 would result in a cost saving to the five co-regulatory arrangement administrators. Currently, the Department advises administrators of revised target data several times during a financial year, with targets not finalised until late in the financial year. This amendment would enable targets to be finalised in November. It is assumed that this would result in three less target revision processes per year, leading to a cost saving for each of the five co-regulatory arrangements of \$785 per year (4 hours of staff time per revision process).

Proposed changes to product codes and conversion factors

The changes proposed to the scheme's product codes and conversion factors are detailed in Appendices A and B.

Regulatory Burden Measure

All regulatory costs, whether arising from new regulations or changes to existing regulation, must be quantified using the Regulatory Burden Measurement framework. Table 2 below presents the estimated change in regulatory burden over a ten year period.

Table 2: Average annual impact on regulatory costs over ten years from 2015–16 to 2024–25

Average annual regulatory costs (from business as usual)				
Change in costs (\$million)	Business	Community organisations	Individuals	Total change in cost
Total, by sector:				
Option 1	\$0	\$0	\$0	\$0
Option 2	-\$8.993	\$0	\$0	-\$8.993
Option 3	-\$9.873	\$0	\$0	-\$9.873
Cost offset (\$million)	Business	Community organisations	Individuals	Total, by source
Agency:	\$0	\$0	\$0	\$0
Are all new costs offset? Deregulatory – cost offsets not required.				
Total (Change in costs – cost offsets) (\$million):				
Option 1: \$0				
Option 2: -\$8.993				
Option 3: -\$9.873				

In Table 2, the change in cost under Option 1 is zero, reflecting the fact that Option 1 is the no-change option in the RIS and is therefore the business as usual scenario.

The changes in costs under Options 2 and 3 are negative, indicating that these options are deregulatory in nature, meaning they deliver a reduction in cost over the ten year

period. The average annual cost reductions are \$8.993 million for Option 2 and \$9.873 million for Option 3. These cost reductions result from reductions in total recycling under Options 2 and 3, compared to option 1.

The overall reduction under option 2 includes reductions of \$89.946 million over ten years due to the reduction in recycling, and additional compliance costs of \$0.019 million.

The overall reduction under option 3 includes reductions of \$98.754 million over ten years due to the reduction in recycling, and additional compliance costs of \$0.019 million.

**Appendix A: Proposed data for Schedule 1 C, to apply to imports
from 1 July 2014 to 30 June 2015.**

Proposed data for schedule 1C—Television or computer products, product codes and conversion factors from 1 July 2014 to 30 June 2015

Part 1—Televisions

Division 1—Colour

Colour televisions—product codes and conversion factors			
Item	Column 1 Description	Column 2 Product code	Column 3 Conversion factor (kg)
1.1	Plasma:		
	(a) screen size less than 76cm	8528.72.00.23	23.9
	(b) screen size 76cm or more but less than 111cm	8528.72.00.24	23.9
	(c) screen size 111cm or more but less than 137cm	8528.72.00.25	23.9
	(d) screen size 137cm or more	8528.72.00.26	42.9
1.2	LCD and LED:		
	(a) screen size less than 35cm	8528.72.00.81	2.5
	(b) screen size 35cm or more but less than 43cm	8528.72.00.82	2.6
	(c) screen size 43cm or more but less than 51cm	8528.72.00.83	2.8
	(d) screen size 51cm or more but less than 59cm	8528.72.00.84	4.3
	(e) screen size 59cm or more but less than 74cm	8528.72.00.85	5.2
	(f) screen size 74cm or more but less than 84cm	8528.72.00.86	6.5
	(g) screen size 84cm or more but less than 99cm	8528.72.00.87	11.4
	(h) screen size 99cm or more but less than 109cm	8528.72.00.88	11.4
	(i) screen size 109cm or more but less	8528.72.00.89	14.4

Colour televisions—product codes and conversion factors

Item	Column 1 Description	Column 2 Product code	Column 3 Conversion factor (kg)
	than 125cm		
	(j) screen size 125cm or more but less than 135cm	8528.72.00.90	18.1
	(k) screen size 135cm or more but less than 150cm	8528.72.00.91	20.9
	(l) screen size 150cm or more	8528.72.00.92	29.7
1.3	Other	8528.72.00.93	29.7

Division 2—Black and white or other monochrome

Other televisions—product codes and conversion factors			
Item	Column 1 Description	Column 2 Product code	Column 3 Conversion factor (kg)
2.1	Black and white or other monochrome	8528.73.00.35	1.0

Part 2—Computers

Computers—product codes and conversion factors			
Item	Column 1 Description	Column 2 Product code	Column 3 Conversion factor (kg)
3.1	Automatic data processing machines and units, magnetic or optical readers, machines for transcribing data onto data media in coded form, and machines for processing the data:		
	(a) portable automatic data processing machines, weighing not more than 10kg, consisting of at least a central processing unit, a keyboard and a display:		
	(i) laptops, notebooks, palmtops and tablets weighing:		
	(A) not more than 1kg	8471.30.00.31	0.6
	(B) more than 1kg but not more than 3kg	8471.30.00.33	2.3
	(C) more than 3kg but not more than 10kg	8471.30.00.34	3.4
	(ii) other	8471.30.00.90	3.0
	(b) other automatic data processing machines, comprising in the same housing at least a central processing unit and an input and output unit, whether or not combined:		
	(i) personal computers	8471.41.00.21	10.7
	(ii) other	8471.41.00.91	10.0
	(c) other automatic data processing machines, presented in the form of systems:		

Television or computer products, product codes and conversion factors from
1 July 2014 to 30 June 2015

Schedule 1C

Computers **Part 2**

Computers—product codes and conversion factors			
Item	Column 1 Description	Column 2 Product code	Column 3 Conversion factor (kg)
	(i) personal computers	8471.49.00.22	11.0
	(ii) other	8471.49.00.92	11.6
	(d) processing units other than those mentioned in paragraphs (b) and (c), whether or not containing in the same housing one or 2 storage units, input units or output units:		
	(i) central processing units for personal computers	8471.50.00.23	7.4
	(ii) other	8471.50.00.93	13.2
3.2	Monitors and projectors, not incorporating television reception apparatus, reception apparatus for television, whether or not incorporating radio-broadcast receivers or sound or video recording or reproducing apparatus:		
	(a) cathode-ray tube monitors of a kind solely or principally used in an automatic data processing system mentioned in item 3.1	8528.41.00.10	11.4
	(b) other monitors of a kind solely or principally used in an automatic data processing system mentioned in item 3.1:		
	(i) flat screen monitors	8528.51.00.32	6.0
	(ii) other	8528.51.00.33	6.3

Part 3—Printers

Printers—product codes and conversion factors			
Item	Column 1 Description	Column 2 Product code	Column 3 Conversion factor (kg)
4.1	Machines which perform 2 or more of the functions of printing, copying or fax transmission (with printing or copying as the principal function) capable of connecting to an automatic data processing machine or to a network, weighing:		
	(a) not more than 10kg	8443.31.00.20	5.1
	(b) more than 10kg but not more than 20kg	8443.31.00.21	11.7
	(c) more than 20kg but not more than 50kg	8443.31.00.22	32.3
	(d) more than 50kg but not more than 100kg	8443.31.00.23	83.0
	(e) more than 100kg but not more than 150kg	8443.31.00.24	122.0
	(f) more than 150kg but not more than 200kg	8443.31.00.25	152.0
	(g) more than 200kg but not more than 300kg	8443.31.00.26	238.3
	(h) more than 300kg but not more than 500kg	8443.31.00.27	304.0
	(i) more than 500kg	8443.31.00.28	617.2
4.2	Other printers capable of connecting to an automatic data processing machine or to a network, weighing:		
	(a) not more than 10kg	8443.32.00.31	4.3
	(b) more than 10kg but not more	8443.32.00.32	14.6

Television or computer products, product codes and conversion factors from
1 July 2014 to 30 June 2015

Schedule 1C
Printers **Part 3**

Printers—product codes and conversion factors			
Item	Column 1 Description	Column 2 Product code	Column 3 Conversion factor (kg)
	than 20kg		
(c)	more than 20kg but not more than 50kg	8443.32.00.33	26.5
(d)	more than 50kg but not more than 100kg	8443.32.00.34	68.4
(e)	more than 100kg but not more than 150kg	8443.32.00.35	109.2
(f)	more than 150kg but not more than 200kg	8443.32.00.36	157.7
(g)	more than 200kg but not more than 300kg	8443.32.00.37	239.2
(h)	more than 300kg but not more than 500kg	8443.32.00.38	384.2
(i)	more than 500kg	8443.32.00.39	551.0

Part 4—Computer parts and peripherals

Computer parts and peripherals—product codes and conversion factors			
Item	Column 1 Description	Column 2 Product code	Column 3 Conversion factor (kg)
5.1	Automatic data processing machines and units, magnetic or optical readers, machines for transcribing data onto data media in coded form, and machines for processing the data:		
	(a) input or output units, whether or not containing storage units in the same housing:		
	(i) keyboards	8471.60.00.55	0.8
	(ii) joysticks and game pads	8471.60.00.91	0.6
	(iii) mouses and trackballs	8471.60.00.92	0.15
	(iv) scanners:		
	(A) not more than 1kg	8471.60.00.65	0.4
	(B) more than 1kg but not more than 5kg	8471.60.00.66	2.2
	(C) more than 5 kg	8471.60.00.67	7.0
	(v) other	8471.60.00.98	0.6
	(b) storage units:		
	(i) compact disc drives (including burners)	8471.70.00.20	1.0
	(ii) digital video disc drives (including burners)	8471.70.00.25	0.6
	(iii) hard drives	8471.70.00.74	0.5

	(iv) other	8471.70.00.44	0.04
5.2	Parts for machines mentioned in item 3.1:		
	(a) cards (including network, sound, video, IDE, SCSI, and other similar cards)	8473.30.00.62	0.1
	(b) motherboards	8473.30.00.68	0.8
	(c) other	8473.30.00.70	0.3
5.3	Electrical transformers, static converters (for example, rectifiers and inductors)—static converters—separately housed units, designed to be housed in the same cabinet as the central processing unit of machines mentioned in item 3.1	8504.40.30.59	1.5
5.4	Web cameras	8525.80.10.15	0.1

Appendix B: Proposed data for Schedule 1D, to apply to imports from 1 July 2015.

Proposed data for schedule 1D—Television or computer products, product codes and conversion factors from 1 July 2015

Note: See regulations 1.03 and 1.04.

Part 1—Televisions

Division 1—Colour

Colour televisions—product codes and conversion factors			
Item	Column 1 Description	Column 2 Product code	Column 3 Conversion factor (kg)
1.1	Colour televisions:		
	(a) weighing less than 3kg	8528.72.00.XX	2.7
	(b) weighing 3kg or more but less than 5kg	8528.72.00.XX	4.1
	(c) weighing 5kg or more but less than 8kg	8528.72.00.XX	6.3
	(d) weighing 8kg or more but less than 10kg	8528.72.00.XX	9.0
	(e) weighing 10kg or more but less than 12kg	8528.72.00.XX	11.1
	(f) weighing 12kg or more but less than 14kg	8528.72.00.XX	12.9
	(g) weighing 14kg or more but less than 16kg	8528.72.00.XX	14.7
	(h) weighing 16kg or more but less than 18kg	8528.72.00.XX	16.7
	(i) weighing 18kg or more but less than 20kg	8528.72.00.XX	18.8
	(j) weighing 20kg or more but less than 25kg	8528.72.00.XX	22.1
	(k) weighing 25kg or more but less than 30kg	8528.72.00.XX	27.2
	(l) weighing 30kg or more but less than 40kg	8528.72.00.XX	34.6

Colour televisions—product codes and conversion factors

Item	Column 1 Description	Column 2 Product code	Column 3 Conversion factor (kg)
	(m) weighing 40kg or more	8528.72.00.XX	46.6
1.2	Other	8528.72.00.93	46.6

Division 2—Black and white or other monochrome

Other televisions—product codes and conversion factors			
Item	Column 1 Description	Column 2 Product code	Column 3 Conversion factor (kg)
2.1	Black and white or other monochrome	8528.73.00.35	1.0

Part 2—Computers

Computers—product codes and conversion factors			
Item	Column 1 Description	Column 2 Product code	Column 3 Conversion factor (kg)
3.1	Automatic data processing machines and units, magnetic or optical readers, machines for transcribing data onto data media in coded form, and machines for processing the data:		
	(a) portable automatic data processing machines, weighing not more than 10kg, consisting of at least a central processing unit, a keyboard and a display:		
	(i) laptops, notebooks, palmtops and tablets weighing:		
	(A) not more than 1kg	8471.30.00.31	0.6
	(B) more than 1kg but not more than 3kg	8471.30.00.33	2.3
	(C) more than 3kg but not more than 10kg	8471.30.00.34	3.4
	(ii) other	8471.30.00.90	3.0
	(b) other automatic data processing machines, comprising in the same housing at least a central processing unit and an input and output unit, whether or not combined:		
	(i) personal computers	8471.41.00.21	10.7
	(ii) other	8471.41.00.91	10.0
	(c) other automatic data processing machines, presented in the form of systems:		

Television or computer products, product codes and conversion factors from
1 July 2015
Schedule 1D
Computers **Part 2**

Computers—product codes and conversion factors			
Item	Column 1 Description	Column 2 Product code	Column 3 Conversion factor (kg)
	(i) personal computers	8471.49.00.22	11.0
	(ii) other	8471.49.00.92	11.6
	(d) processing units other than those mentioned in paragraphs (b) and (c), whether or not containing in the same housing one or 2 storage units, input units or output units:		
	(i) central processing units for personal computers	8471.50.00.23	7.4
	(ii) other	8471.50.00.93	13.2
3.2	Monitors and projectors, not incorporating television reception apparatus, reception apparatus for television, whether or not incorporating radio-broadcast receivers or sound or video recording or reproducing apparatus:		
	(a) cathode-ray tube monitors of a kind solely or principally used in an automatic data processing system mentioned in item 3.1	8528.41.00.10	11.4
	(b) other monitors of a kind solely or principally used in an automatic data processing system mentioned in item 3.1:		
	(i) flat screen monitors		
	(A) weighing not more than 5kg	8528.51.00.XX	4.2
	(B) weighing more than 5kg but not more than 10kg	8528.51.00.XX	6.0
	(C) weighing more than 10kg	8528.51.00.XX	20.3
	(ii) other	8528.51.00.33	6.3

Part 3—Printers

Printers—product codes and conversion factors			
Item	Column 1 Description	Column 2 Product code	Column 3 Conversion factor (kg)
4.1	Machines which perform 2 or more of the functions of printing, copying or fax transmission (with printing or copying as the principal function) capable of connecting to an automatic data processing machine or to a network, weighing:		
	(a) not more than 10kg	8443.31.00.20	5.1
	(b) more than 10kg but not more than 20kg	8443.31.00.21	11.7
	(c) more than 20kg but not more than 35kg	8443.31.00.XX	25.2
	(d) more than 35kg but not more than 50kg	8443.31.00.XX	43.5
	(e) more than 50kg but not more than 100kg	8443.31.00.23	83.0
	(f) more than 100kg but not more than 150kg	8443.31.00.24	122.0
	(g) more than 150kg but not more than 200kg	8443.31.00.25	152.0
	(h) more than 200kg but not more than 300kg	8443.31.00.26	238.3
	(i) more than 300kg but not more than 500kg	8443.31.00.27	304.0
	(j) more than 500kg	8443.31.00.28	617.2
4.2	Other printers capable of connecting to an automatic data processing machine or to a network, weighing:		

Television or computer products, product codes and conversion factors from
1 July 2015
Schedule 1D
Printers **Part 3**

Printers—product codes and conversion factors			
Item	Column 1 Description	Column 2 Product code	Column 3 Conversion factor (kg)
	(a) not more than 1kg	8443.32.00.XX	0.55
	(b) more than 1kg but not more than 5kg	8443.32.00.XX	2.6
	(c) more than 5kg but not more than 10kg	8443.32.00.XX	6.3
	(d) more than 10kg but not more than 20kg	8443.32.00.32	14.6
	(e) more than 20kg but not more than 50kg	8443.32.00.33	26.5
	(f) more than 50kg but not more than 100kg	8443.32.00.34	68.4
	(g) more than 100kg but not more than 150kg	8443.32.00.35	109.2
	(h) more than 150kg but not more than 200kg	8443.32.00.36	157.7
	(i) more than 200kg but not more than 300kg	8443.32.00.37	239.2
	(j) more than 300kg but not more than 500kg	8443.32.00.38	384.2
	(k) more than 500kg	8443.32.00.39	551.0

