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March 31, 2017

ELECTRONICALLY FILED

Public Utility Commission of Oregon
Filing Center
201 High Street SE, Suite 100
P.O. Box 1088
Salem, Oregon 97301

Re: Informational Filing for Oregon Tariff Advice No. 16-07
Reinstatement of Schedule 70, Appliance Recycling Program

Attention Filing Center:

The Public Utility Commission of Oregon (“Commission”) authorized the reinstatement of Schedule 70, Appliance Recycling Program (“Program”) in Tariff Advice No. 16-07. In its memo, Staff requested the Commission require that certain conditions be imposed upon Idaho Power. The Commission accepted Staff’s recommendations in its decision meeting on June 8, 2016, which imposed the following requirements upon Idaho Power:

- The contractor must accurately record the year of production (Vintage) for all refrigerators and freezers picked up in 2016.
- Company staff must develop an estimated level of measure penetration by Vintage (e.g., < 1992 and > 1993) of refrigerators and freezers in the Company’s territory using the 2016 data it collects and any other relevant data.
- When the Company attempts to determine Program cost-effectiveness for 2017, it must use both types of revised UES values (Vintage vs. All) and continue to break out the LED lighting measure separately.
- By the end of the first quarter of 2017, Idaho Power must share its projection for Program cost-effectiveness in 2017 along with its estimated levels of Program measure penetration utilizing the recommendations above and any other relevant data.

Vintages for 2016 Refrigerators and Freezers

In 2016, the Regional Technical Forum (“RTF”) updated the savings assumptions for recycled refrigerators and freezers and provided deemed unit energy saving (“UES”) values by vintage. Between 1987 and 2014, new federal standards for refrigerators and freezers were adopted four times. The second federal standard adopted by the Department of Energy became

effective in 1993¹ and the RTF chose this year as a cutoff for determining UES values by vintage. Because refrigerators and freezers manufactured on or before 1992 use more energy than those manufactured 1993 and later, recycling these older units will save customers more energy. As recommended by Staff in Advice No. 16-07, Idaho Power required the contractor to record the vintage for all refrigerators and freezers picked up in 2016.

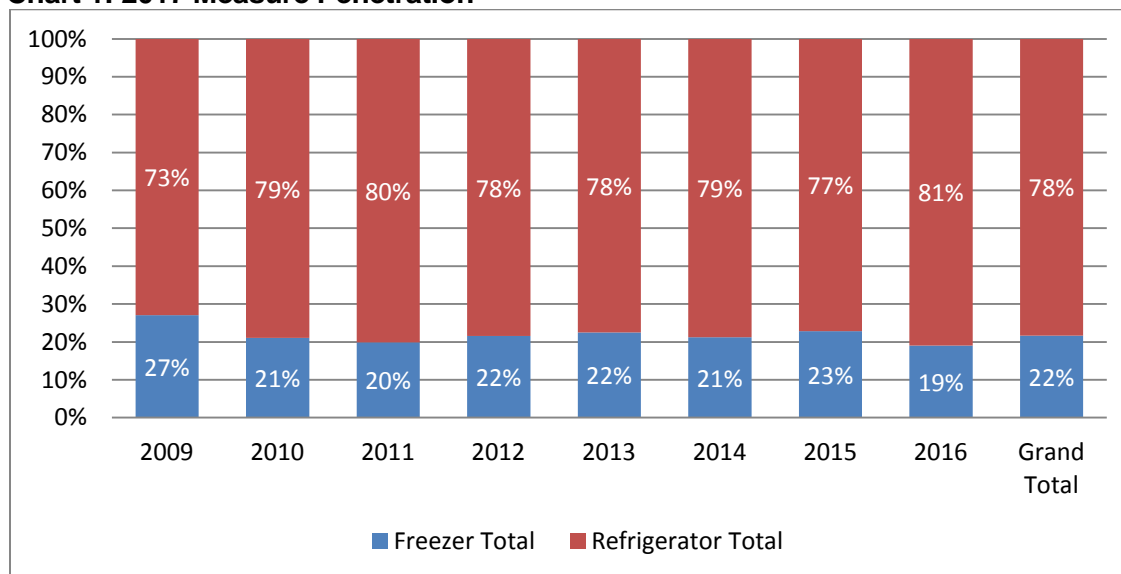
The results are as follows:

Measure	Vintage	Number of Units
Freezers	1992 and earlier	130
Refrigerators	1992 and earlier	295
Freezers	1993 and later	163
Refrigerators	1993 and later	951
Total		1,539

2017 Measure Penetration

Chart 1 below demonstrates the split between recycled refrigerators and freezers for 2009 through 2017.

Chart 1: 2017 Measure Penetration



2017 Measure Penetration by Vintage

Charts 2 and 3 demonstrate that Program participants recycling vintage year 1993 and newer are accounting for more of the recycled units.

¹ <https://appliance-standards.org/product/refrigerators-and-freezers>

Chart 2 shows that when the Program began in 2009, 90 percent of the freezers recycled were 1992 and older. In 2016, 44 percent of freezers recycled were of that vintage.

Chart 2: Freezer Vintage

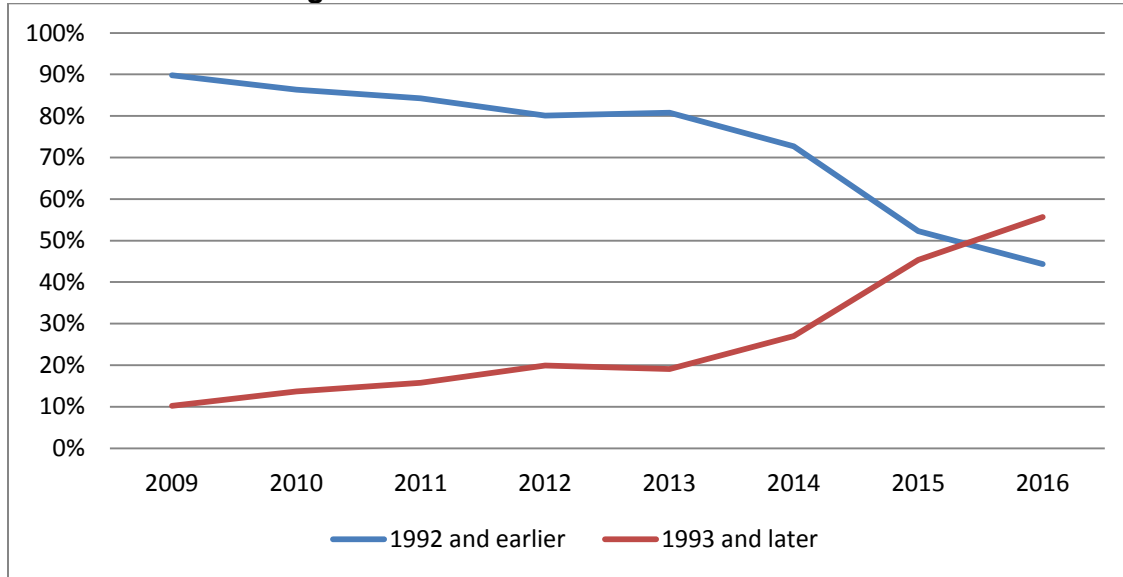
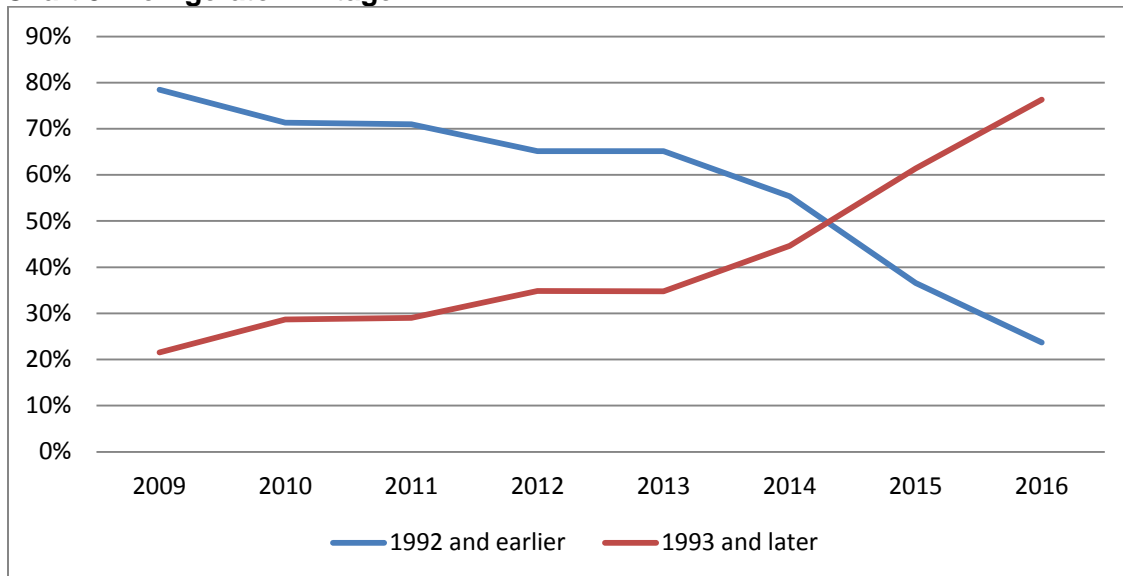


Chart 3 shows that in 2009, 78 percent of refrigerators recycled in the Program were vintage year 1992 and older. By 2016, 24 percent of the total recycled refrigerators were vintage year 1992 and older.

Chart 3: Refrigerator Vintage



2017 Projected Program Cost-Effectiveness (Vintage vs. Any)

When Idaho Power filed Advice No. 16-07 in April 2016, the Company estimated that the total annual participation would be 1,800 units. In accordance with condition 10 of Commission Order No. 94-590 issued April 6, 1994, in Docket No. UM 551, Idaho Power included administrative costs when calculating the cost-effectiveness at the measure level.

To determine cost-effectiveness for a measure, the Company applies administrative costs to measures on a dollar per kilowatt-hour (“kWh”) basis.² In the case of the Appliance Recycling Program, when administrative costs are applied in this manner, the measures with lower kWh energy savings (units 1993 and later) appear to be more cost-effective than the units with higher energy savings (units 1992 and earlier) because less administrative costs are applied to those older units. Realistically, there is a flat amount charged by the contractor; therefore, a dollar per unit is a more accurate reflection of the administrative costs associated with each unit. The 2017 projected program and measure cost-effectiveness is shown applying the administrative costs both ways in the following tables.

2017 Projected Cost-Effectiveness – Any Vintage

Program/ Measure	With Program Administration Costs				
	Number of Units (based on 2016 data)	UC (admin \$/kWh)	TRC (admin \$/kWh)	UC (admin \$/unit)	TRC (admin \$/unit)
Program	1,800	0.74	1.23	0.74	1.23
Freezer Recycling (any vintage)	343	0.68	0.99	0.89	1.30
Refrigerator Recycling (any vintage)	1,457	0.77	1.20	0.66	1.03
LED bulb measure (give away)	3,600	1.69	4.69	1.69	4.69

2017 Projected Cost-Effectiveness – By Vintage

Program Measure	With Program Administration Costs				
	Number of Units (based on 2016 data)	UC (admin \$/kWh)	TRC (admin \$/kWh)	UC (admin \$/unit)	TRC (admin \$/unit)
Program	1,800	0.50	0.97	0.50	0.97
Freezer Recycling (≤ 1992)	152	0.37	0.54	0.99	1.43
Refrigerator Recycling (≤ 1992)	345	0.44	0.62	1.03	1.46
Freezer Recycling (≥ 1993)	191	0.84	1.93	0.24	0.56
Refrigerator Recycling (≥1993)	1,112	0.67	1.63	0.23	0.57
LED bulb measure (give away)	3,600	1.69	4.69	1.69	4.69

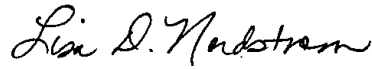
² For reference, the following is a link to the Company’s 2016 Demand-Side Management Annual Report Supplement 1: Cost-Effectiveness:
<https://www.idahopower.com/pdfs/EnergyEfficiency/Reports/2016Supplement1.pdf>

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Because trends show that newer units are being recycled in the Program, Idaho Power finds it appropriate to use the vintage specific deemed UES values from the RTF. At this point, the Program is projected to be not cost-effective based on the vintage splits using 2016 actual participation numbers. Idaho Power will continue to monitor the Program's activity throughout 2017 and update its Energy Efficiency Advisory Group of the Program's cost-effectiveness and the efforts the Company is undergoing to determine if the Program will continue to be offered past 2017.

If you have any questions regarding this filing, please contact Regulatory Analyst Jill Simpson at (208) 388-2517 or jsimpson@idahopower.com.

Sincerely,

A handwritten signature in cursive script that reads "Lisa D. Nordstrom".

Lisa Nordstrom

LDN:kkt