

REGULATORY IMPACT STATEMENT FOR TELEVISIONS

Prepared by:

Energy Efficiency Branch,
BC Ministry of Energy, Mines and Petroleum Resources
<http://www.empr.gov.bc.ca/EEC/Strategy/EEA/Pages/default.aspx>

September 2010

<p>Type of Device</p>	<p>Televisions: A commercially available electronic product designed primarily for the reception and display of audiovisual signals received from terrestrial, cable, satellite, Internet Protocol TV (IPTV), or other digital or analog sources. A TV may consist of a tuner/receiver and a display encased in a single enclosure. The product usually relies upon a cathode-ray tube (CRT), liquid crystal display (LCD), plasma display, or other display technology.</p> <p>Included:</p> <ul style="list-style-type: none"> - Combination TVs - Television monitors - Component TVs - Any unit marketed to a consumer as a TV <p>Not included: Front projectors.</p> <p>Note: <u>California exempts TVs with 58-inch screens or larger be exempt from the regulation. The Ministry is soliciting stakeholder input as to whether this exemption should be removed, and if so, what timeline would be appropriate for lifting the exemption.</u></p>
<p>Test Standard</p>	<p>CAN / CSA – 62301-07 standard used to test for off mode and standby mode only. California Code of Regulations, Title 20, Sections 1602 and 1604 (Definitions and Test Method) standard used to test for on mode.</p>
<p>Proposed Energy Performance Standard</p>	<p>Note: BC is not proposing to regulate Tier 1 of the California TV standard which takes effect January 1, 2011. There is already virtually 100% compliance with Tier 1 standards for TVs sold in British Columbia in 2010, according to BC Hydro market survey data.</p> <p>Passive Standby Power – 1 watt</p> <p>Maximum On Mode Power (Watts)</p> <ul style="list-style-type: none"> • Tier 2: $0.12 \times \text{Screen Area (in}^2) + 25$ <p>Luminance requirements:</p> <p>Luminance of home setting must be $\geq 65\%$ of brightest setting (Equivalent to ENERGY STAR 4.1)</p>

Effective Date	<p>Tier 2 :</p> <p>Option A: January 1, 2012</p> <p>Option B: January 1, 2013</p> <p>Note: <u>As part of the fall 2010 consultations, the Ministry is seeking input from stakeholders and the general public as to whether the Tier 2 effective date should be January 2012 (one year earlier than California) or January 2013 (harmonized with California).</u></p>
Certification	<p>Natural Resources Canada is developing an EnerGuide label for televisions, effective July 2011.</p> <p>An alternative method of verifying compliance is the voluntary ENERGY STAR designation. Tier 2 of the proposed standard is equivalent to ENERGY STAR 4.1 (released on May 1, 2010).</p>

Need for the Regulation	<p>The proposed regulation supports the target for BC Hydro to meet 66% of electricity demand growth through demand-side measures by 2020, as stated in the <i>Clean Energy Act</i>. If adopted, the new standards would position BC among the leading jurisdictions in North America on energy efficiency standards for televisions.</p>
Transparent Regulation Development	<p>Development of regulation followed the following procedure:</p> <ul style="list-style-type: none"> • Identified a potential standard adopted in other jurisdictions (California) • Market analysis including retail survey completed by BC Hydro • Economic assessment • Regulatory assessment <p>Currently undergoing formal stakeholder consultation, with written responses to regulatory impact statement. Stakeholder feedback sessions to be scheduled as required.</p>

<p>Market Transformation Strategy</p>	<p>BC Hydro launched a Power Smart Consumer Electronics program in April 2009 in response to the growing demand for electronics in the home. The average home has 25 electronic products today, compared to 15 electronic products in 2000. There is a technology change in the television market, where the traditional CRT TV has been replaced by flat panel displays, LCD and Plasma.</p> <p>An ENERGY STAR specification for televisions came into effect in November 2008 that addressed both on mode and standby mode power. In response to rapidly increasing energy-efficiency of products, Power Smart increased its energy efficiency specification to a higher level in the last year.</p> <p>The mid-stream incentive for retailers was to sell televisions that were 15% better than ENERGY STAR, starting April 1, 2009. For 2009, the retailer received \$25 on average for televisions that meet the specification. From October 2009 to April 2010, the program offered incentives for televisions that were 30% better than ENERGY STAR.</p> <p>New ENERGY STAR specifications were developed to adapt to the increasing energy efficiency of televisions. ENERGY STAR 4.1 became effective on May 1, 2010 and ENERGY STAR 5.1 will take effect May 1, 2012. The Power Smart program is offering incentives on ENERGY STAR 4.1 as of May 1, 2010. As of July 1, 2010, the incentive will be available only for products that are equivalent to ENERGY STAR 5.1.</p>
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Assessment from an Industry Perspective

Range of products affected	<p>All standard consumer television products (including plasma and LCD). Stakeholder input is requested as to whether to eliminate the California exemption for large-screen TVs (58 inch screens and larger).</p>
Cost impacts	<p>Under Option A, the 2nd tier of the regulation is scheduled to take effect in 2012, and compliant product lines are expected to be widely available prior to that time. Cost assessments for consumers are discussed in the next section of the regulatory impact statement.</p>
Competitive Analysis	<p>There are no manufacturers of the products covered by this regulation in British Columbia. Marketing and distribution of TV product lines is done on a continental basis. With the proposed BC regulations equivalent to the California standards (except for the recommended earlier timeline for Tier 2 and elimination of the large-screen exemption), there is little risk of demand leakage to neighbouring jurisdictions after adoption of the regulations.</p>
Market Share	<p>Current market share for products subject to the proposed regulation: Tier 2: 50% (2010), projected to increase to 75% (2011) with a strong indication, based on ongoing BC Hydro market analysis, that the market share will continue to go up in 2012 and 2013.</p>
Waste Management	<p>Since 2007, province wide recycling programs for televisions have been required under the Ministry of Environment's Recycling Regulation.</p>

Cost Assessment from a Consumer Perspective

Criteria	Evaluation
<p>Capital / purchase costs</p>	<p>Recent market studies indicate the proposed standard could increase the purchase cost of Tier 2 compliant televisions by up to \$40, compared to the current average prices for less efficient models which will be prohibited by the regulation, and this figure has been used in the economic analysis for this study.</p> <p>However, under both Option A and B, this incremental price is likely to be reduced before the effective date, because of anticipated high compliance levels with Tier 2 standards as of 2011 by manufacturers on a voluntary basis.</p>
<p>Cost-Benefit Analysis</p> <p>Energy savings for each consumer</p>	<p>The proposed standards for televisions will have a positive financial impact on consumers. Their lower energy bills will outweigh any extra costs associated with purchasing compliant products.</p> <p>The economic analysis that supports this document focuses on a weighted average over a range of screen sizes from 10” to 58” screen diagonal. The analysis results reflect a weighted average of products on the market and might vary for individual products.</p> <p>The analysis was based on an electricity price of 6.2 cents/kWh in 2010, with rate increases as indicated in Budget 2010 and in the most recent BC Hydro long-term acquisition plan (LTAP). All financial analysis is discounted at 8%.</p> <p>Option A (Tier 2 effective Jan 2012):</p> <p>The net present value (NPV) of 89 kWh/year electricity savings is about \$7.34. This provides a simple payback on investment of 5.8 years.</p> <p>Option B (Tier 2 effective Jan 2013):</p> <p>The net present value (NPV) of 89 kWh/year electricity savings is about \$8.52. This provides a simple payback on investment of 5.6 years.</p>

Assessment from a Provincial Government Perspective

Economic assessment from a provincial perspective

(Aggregate energy, emission and net cost savings)

The economic analysis considers the province-wide impact. Based on data from Budget 2010 and the 2008 BC Hydro LTAP, the marginal cost of electricity supply was used, assumed to be 11 cents per kWh in 2010 plus a 2.5% per year escalator above normal inflation until 2018. The product life of televisions is set at 8 years. The incremental capital cost of products is the same as those noted in the consumer impact assessment section.

The cumulative electricity and cost savings generated from the effective date to 2020 are shown below:

Option A (2012):

Proposed Regulations	Cumulative Electricity Savings to 2020 (GWh/yr and million \$)
Televisions	390 GWh / \$258.4M

Option B (2013):

Proposed Regulations	Cumulative Electricity Savings to 2020 (GWh/yr and million \$)
Televisions	340 GWh / \$197.8M

The net present values (discounted financial value) to the province of the proposed standard are shown below:

Option A (2012):

Proposed Regulations	Provincial NPV (millions)
Televisions	\$69.2M

Option B (2013):

Proposed Regulations	Provincial NPV (millions)
Televisions	\$68.3M

	<p>The proposed regulation will result in yearly greenhouse gas (GHG) emissions reductions. The cumulative emissions savings from the effective date to 2016 from the proposed regulations are shown below, assuming an emissions factor of 28 tonnes per GWh for electricity until 2016:</p> <p>Option A (2012):</p> <table border="1" data-bbox="518 459 1310 644"> <thead> <tr> <th data-bbox="518 459 971 573">Proposed Regulations</th> <th data-bbox="971 459 1310 573">Cumulative GHG Savings to 2016 (tonnes)</th> </tr> </thead> <tbody> <tr> <td data-bbox="518 573 971 644">Televisions</td> <td data-bbox="971 573 1310 644">6,768</td> </tr> </tbody> </table> <p>Option B (2013):</p> <table border="1" data-bbox="518 714 1310 898"> <thead> <tr> <th data-bbox="518 714 971 827">Proposed Regulations</th> <th data-bbox="971 714 1310 827">Cumulative GHG Savings to 2016 (tonnes)</th> </tr> </thead> <tbody> <tr> <td data-bbox="518 827 971 898">Televisions</td> <td data-bbox="971 827 1310 898">5,111</td> </tr> </tbody> </table>	Proposed Regulations	Cumulative GHG Savings to 2016 (tonnes)	Televisions	6,768	Proposed Regulations	Cumulative GHG Savings to 2016 (tonnes)	Televisions	5,111
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<p>Regulatory Requirements Avoid or Eliminate Duplication with Other Jurisdictions</p>	<p>The proposed regulations are 100% harmonized with the Tier 2 levels of the California title 20.</p> <p>Option A (2012): The Tier 2 effective date is one year early than in California.</p> <p>Option B (2013): The Tier 2 effective date is the same as in California.</p>								
<p>Administrative Feasibility for Compliance and Enforcement</p>	<p>Compliance and enforcement approach under the <i>Energy Efficiency Act</i> is based on third-party verification, labelling of products and education of manufacturers, distributors, retailers and consumers with respect to energy efficiency standards and labelling requirements.</p> <p>The Natural Resources Canada labelling standards for televisions are expected to take effect in July 2011, and the updated Canadian Standards Association test standard is expected to be finalized by late 2010. These two mechanisms will support compliance with Tier 2 under both Option A and Option B.</p>								

<p>Regulatory Assessment Completed by</p>	<p>Erik Kaye, Senior Policy Advisor – Energy Efficiency Branch Tel: 250-356-1507 Email: Erik.Kaye@gov.bc.ca</p>
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