**Guidelines for Front Runner Public Procurers**

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| Television sets  [Yuri Vandresen](mailto:contato@topten.info), June 2021 |  |

# Why follow Topten criteria?

* Topten.eco.br (**www.topten.eco.br**) is a Brazilian web portal helping buyers, professionals, public procurers and large buyers to find **the most energy efficient products available in Brazil**. The products are selected and updated continuously, according to their high energy and environmental performances, independently from the manufacturers.
* All television sets displayed on [**www.topten.eco.br**](http://www.topten.eco.br) meet the criteria contained in these guidelines. Procurers can therefore use the website to check the availability and assortment of products currently on the market, which meet the [**Topten selection criteria**](https://topten.eco.br/private/selection-criteria/criterio-televisores).

# How much can you save?

Considering television sets listed on [www.topten.eco.br](http://www.topten.eco.br) and the following assumptions, it is possible to achieve the savings indicated in the next table.

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| Assumptions | * Lifetime expectation: 10 years |
| * Daily use: 4h in on-mode |
| * Electricity cost: 0.59 R$/kWh |

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|  | **Topten model** | **Inefficient model** |
| Screen diagonal | 124cm / 49" | 124 cm / 49" |
| Energy class | A | A |
| **Resolution** | HD | HD |
| **Electricity consumption** | 160 kWh/year | 223 kWh/year |
| **Use cost (electricity in 10 years)** | R$ 944 | R$ 1316 |
| **Savings in 10 years** | **28% energy / unit**  **⇨ R$ 372 / unit** | |

As the example shows, total savings can reach 28% reduction, and they should be multiplied by the number of units included in the tender.

Due to longer daily usage, energy consumption and potential savings by TVs are higher in a professional environment than for home TVs. While the annual energy consumption declared on the Energy Label and on Topten.eco.br is calculated based on an assumed usage of 4 hours per day, for professional use one should assume 8 hours per day. This means doubling the absolute amount of energy and money saved, albeit maintaining the percentual economy.

# Procurement criteria

The following criteria can be inserted directly into tendering documents. The Topten selection criteria and the product lists are updated regularly. The newest versions are always available at [**www.topten.eco.br**](http://www.topten.eco.br)**.**

**Subject: Highly energy-efficient television sets**

Technical Specifications

1. **On-mode** **power and energy consumption**

The on-mode power must be declared according to the ENCE (Energy Conservation National Label). The monthly energy consumption shown in the Energy Label considers a daily usage of 4 hours in on-mode and 20 hours in stand-by mode during 30 days per month.

1. **Standby and off-mode power consumptions**

INMETRO Ordinance nº 563/2014 for televisions states that the maximum power in stand-by mode is 1W. If the maximum power in stand-by mode is higher than 1W the television will be considered non-conformant.

1. **Energy label**

Energy labels for televisions are also regulated by INMETRO Ordinance nº 563/2014. The regulation defines an energy label scale from A to E, being A the most efficient and E the least efficient category. The televisions are categorised based on their Energy Efficiency Indexes (EEI), according to the table below:

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|  |  |  | **INMETRO Ordinance Nº 563/2014** | | |
| **Energy efficiency class** | **Energy efficiency index** | |
| A | EEI < 0.4 | |
| B | 0.4 ≤ EEI < 0.5 | |
| C | 0.5 ≤ EEI < 0.6 | |
| D | 0.6 ≤ EEI < 0.7 | |
| E | 0.8 ≤ EEI | |
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**PROCEL Label**

The PROCEL (National Electrical Energy Conservation Program) recognises products that have a higher energy efficiency amongst their competitors. It guarantees lower energy consumption during use and standby and minimum energy efficiency class A.

For a television model to achieve the PROCEL Label, its Energy Efficiency Index **cannot be higher than 0.25**. This index is calculated by the following equation:

Where PTM is the Medium Total Power and PRef is the Reference Power, which is calculated in relation to the characteristics of the television and its surface area.

# Advice and support

If you would like further assistance in using the information presented here in your own procurement actions or more information on [Topten Pro](http://www.topten.eu/pro) please contact your national Topten team (find the links on Topten.eco.br).

The [PROCEL](http://www.procelinfo.com.br/) and [INMETRO](http://inmetro.gov.br/) websites also contain valuable legal and practical guidance together with procurement criteria for a range of commonly procured products and services.

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