Fact Sheet: LED LCD TV

Analysis of the Life Cycle
This fact sheet shows the results of the life cycle analysis of climate relevant emissions and its relevant environmental impacts concerning LED LCD television devices. It shows which LED LCD TVs of LG Electronics are the most climate-friendly.

Product Information
The following products of the LG Electronics Inc. assortment were compared:

<table>
<thead>
<tr>
<th>CINEMA 3D Smart TV, 47LW5500-ZE</th>
<th>CINEMA 3D Smart TV with CINEMA SCREEN Design, 47LM760S-ZA</th>
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<tbody>
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<td>47 Inches, LED, Full HD LCD TV</td>
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Functional Unit: Usage of the LED LCD TV during one year. Both devices have the same function and the same benefit.

Comparison
It has been compared, if the current LED 3D TV of the LG assortment compared to the former model causes significantly less climate impact. It is the best-selling LED 3D TV of LG Electronics. The greenhouse gas emissions and the environmental impact were summed up over the whole life cycle of LED 3D TV during 7 years, i.e. from the winning of the raw materials, to the production, the transportation, the usage, through to the waste disposal. The geographical scope is Europe.

The Climatop-Certificate
The Cinema 3D TV 47LM760S-ZA is certified as „approved by Climatop“. This is the first balance concerning LED LCD TVs. The Champion keeps its certification until it expires after two years, then a revaluation is necessary.

Validity: March 2012 until April 2014

Results
The current model has a significantly lower climate impact than the former one. It emits annually 17 % fewer CO₂ equivalents. The illustration „Total Climate Impact“ compares the total emissions. Due to higher energy efficiency and due to mass reduction, the emissions have been reduced.
Discussion
The lower emission is considered as direct consequence of the reduced mass of the current model. This mass reduction could be achieved thanks a special kind of glass and the innovative design. In that way, raw materials are saved and less energy is used for the transport. Moreover, the current model needs less electricity thanks to a new LCD module. The model is certified as Energy Efficiency Index A+.

Environmental Impact
The results of the environmental impact analysis are similar to the greenhouse gas emission analysis. The total environmental impact of the current model is lower compared to the former one. The analysis of the individual environmental impacts shows that no impact category is relevantly worse. Moreover, the Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment 2002/95/EC (or RoHS) is obeyed. These Directives set the rules for the usage of dangerous materials in devices and building elements.

Explanation
There is no eco-balance for TVs, which compare the total average emissions of a TV and reflects the industrial average. For a better understanding of the performance of the certified CINEMA 3D Smart TV, the industrial average of the use phase is shown in the illustration below. The industrial average represents the emissions caused in the use-phase of 51 LED 3D TVs (46” and 47”) of 8 different producers. The CINEMA 3D Smart TV that is approved by Climatop is better than the industrial average. Climatop acclaims other competitors to participate to these studies.

Climate-friendly Usage of the CINEMA 3D Smart TV – some tips:
The certified TV has also an energy saving function. If you use this function, the energy use is lowered by further 23%. If you do not use the TV, turn it off. It is in the standby function, energy is used.