



Netherlands Enterprise Agency

**Code of Conduct on Energy  
Efficiency of Digital TV Service  
Systems  
Version 9**

Hans-Paul Siderius  
Netherlands Enterprise Agency

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## Overview

- Aim
- Equipment covered
- General Principles
- Time schedule and targets
- Signatures



## Aim and equipment covered

**Aim:** to set requirements to minimize overall energy consumption (kWh) per Equipment without hampering the functionality and the convenient use of Equipment, *which can be achieved by those aspiring to the best possible outcomes in the area of energy consumption.*

**Equipment covered:**

- Complex Set Top Boxes (Headed and Headless)

**Not** covered are:

- Simple Set Top Boxes
- Digital TVs with integrated receiver decoder
- Products handling gateway services to multi-subscriber scenarios
- Devices whose primary function is something else than reception of digital TV signals, e.g. computers and game consoles with digital tuners, USB digital receivers for computers



## General principles

1. Design to minimize energy consumption (within constraints of operational specifications).
2. Energy management built in.
3. Headed Equipment must offer at least one Standby mode ...
4. ... and must be able to go to a Standby mode upon user command ...
5. ... and must have APD functionality.
6. Headless Equipment with Networked Standby functionality must have APD functionality.
7. If Equipment leaves Standby mode, e.g. for downloading software, it should return within 15 minutes after completion of the task.
8. Disconnection from the mains power supply should be possible
9. Equipment supplied with Speculative Recording must have an option for the user to disable Speculative Recording.



## Time schedule and targets I

<b>Base Functionality</b>	<b>Tier 1 (July 1, 2013) Annual Energy Allowance [kWh/ year]</b>	<b>Tier 2 (July 1, 2015) Annual Energy Allowance [kWh/ year]  (Value to be confirmed 1 year before effective date)</b>
<b>Cable</b>	<b>45</b>	<b>37</b>
<b>Satellite</b>	<b>50</b>	<b>40</b>
<b>IP</b>	<b>26</b>	<b>20</b>
<b>Terrestrial</b>	<b>37</b>	<b>32</b>
<b>Thin-Client/Remote</b>	<b>26</b>	<b>20</b>



## Time schedule and targets II

<b>Additional Functionalities</b>	<b>Tier 1 (July 1, 2013) AEA [kWh/year]</b>	<b>Tier 2 (July 1, 2015) AEA [kWh/year]</b>
Access to additional RF channels (per channel)	7	6
Advanced Video Processing	0	0
High Efficiency Video Processing	20	13
Full High Definition Processing	0	0
Ultra High Definition Processing	20	13
3DTV Processing	20	13
Advanced Graphics Processing	5	0
Multi-encoding	10	8
Multi-display	5	5
Basic In-Home Networking, e.g. WiFi, MoCA, Powerline	18	14
	12	5
In-Home Networking Access Point-Router	53	37
Return Path (ADSL or DOCSIS 2.0 or VDSL)	30	30
Return Path (DOCSIS 3.0) once per equipm. for each additional 4 bonded RF channels	45	25
	20	5
DVR	15	10
VOIP	20	16
Smart Home services / Ultra high processing capability	TBD	TBD

>> Focus on energy and climate change



## Signatories

- Technicolor



- PACE



- Swisscom



- Belgacom



More signatories welcome!



Thank you for your attention!

Questions?