

Game Console Voluntary Agreement 3rd Steering Committee Meeting

December 1, 2016
Brussels



AGENDA

1. Welcome and Introductions
2. 2nd Steering Committee meeting (June 2016)
 - Approval of minutes
 - Review of actions
3. Update from the Signatories
 - Newly launched consoles
 - VA 2016 revision
 - The 2017 review
4. Update from the European Commission
 - Adoption of 2016 Consoles VA revision
 - VA Guidelines
5. AOB
6. Date of the next Steering Committee meeting

WELCOME AND INTRODUCTIONS



2ND STEERING COMMITTEE MEETING (JUNE 2016)

- Approval of minutes

2ND STEERING COMMITTEE MEETING (JUNE 2016)

Review of actions

Signatories to send Product Compliance Reports to VA Administrator. **DONE**

VA Administrator to upload Product Compliance Reports on website by 30 June. **DONE**

Signatories to prepare 2016 VA revision document. **DONE**

EC to check if College of Commissioners needs to sign-off on updated document. **DONE**

VA Administrator to send Doodle poll for December 2016 SC date. **DONE**

VA Administrator to prepare and share minutes of the current meeting. **DONE** 5

UPDATE FROM THE SIGNATORIES

CONSOLES ON THE MARKET

- Sony
- Microsoft
- Nintendo



PlayStation®4 and PlayStation®4 Pro

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Current platforms



Steps to lower PS4 energy use

LAUNCH 2013

- System on a Chip
- Efficient power supplies (92% conversion)
- Clock and power gating
- Background download
- Low power peripheral charging
- Low power standby and networked standby modes
(*beyond regulatory requirements*)



Steps to lower PS4 energy use

2015

- Default APD set to 20 minutes in EU
- USB charging powers-down after 3h
- Suspend to RAM: power down without losing progress
- Optimisation of SOC operation and scaling, particularly for media play
- Optimisation of memory operation and hardware
- Blu-ray electronics condensed and integrated onto the motherboard
- Other minor component integrations



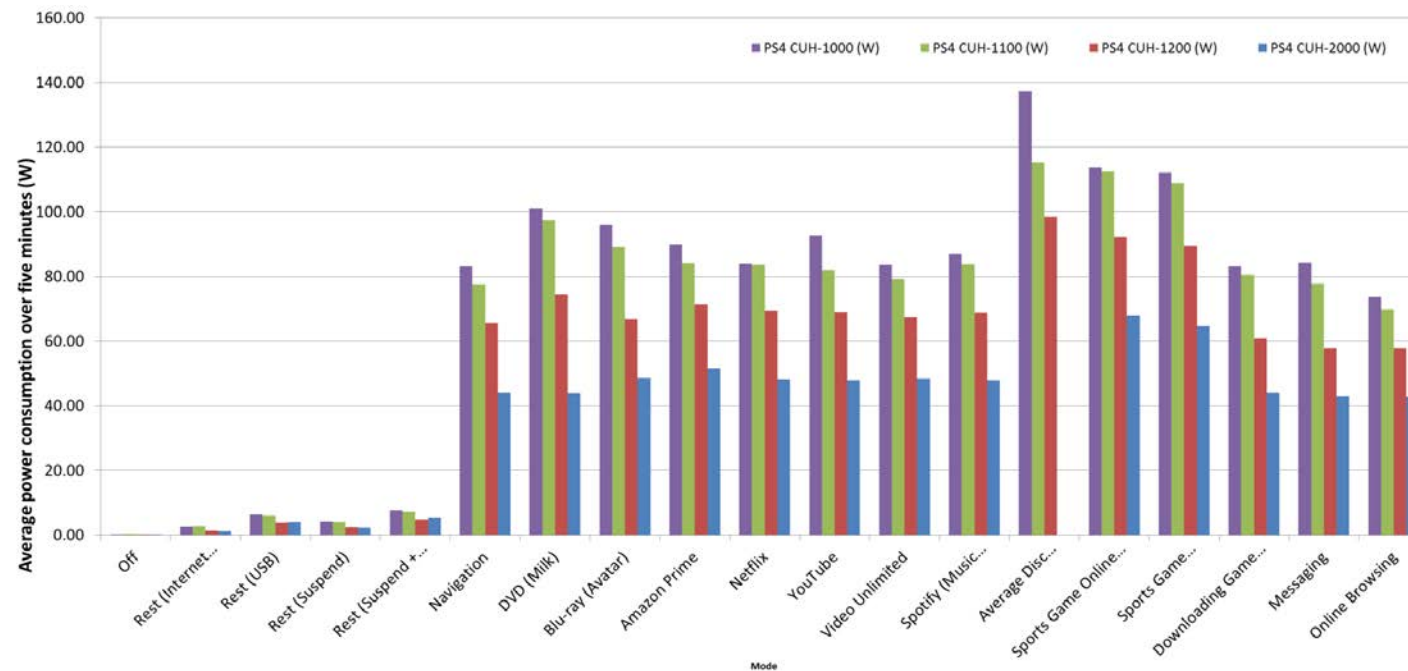
Steps to lower PS4 energy use

2016

- Die shrink from 28 nm to 16 nm



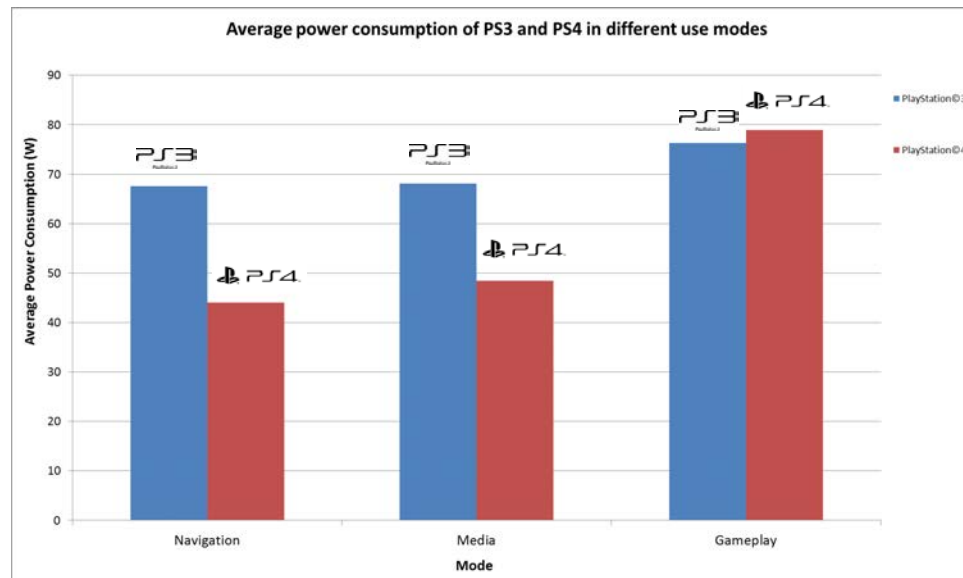
PS4 Slim power reduced by '43%



- Three years since launch in 2013
- Media & navigation power now <50 W



PS4 power consumption < PS3*



- Reduction is through deliberate steps to reduce energy use

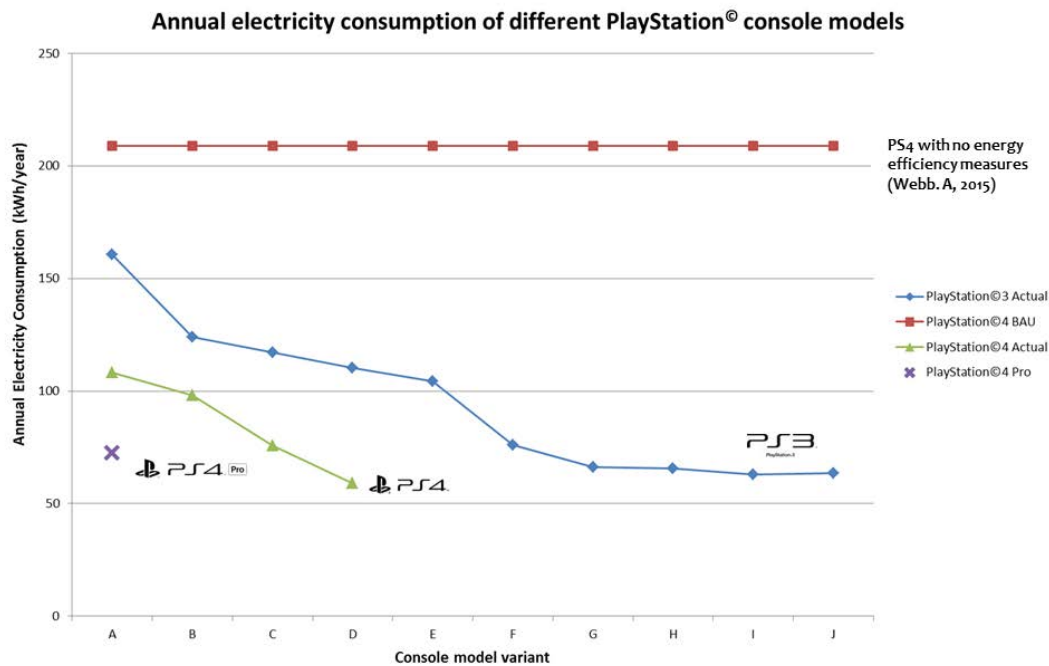
*PS4 navigation & media power consumption now lower than the last, most efficient PS3 model



VS



PS4 achieves a paradigm shift in energy use of consoles

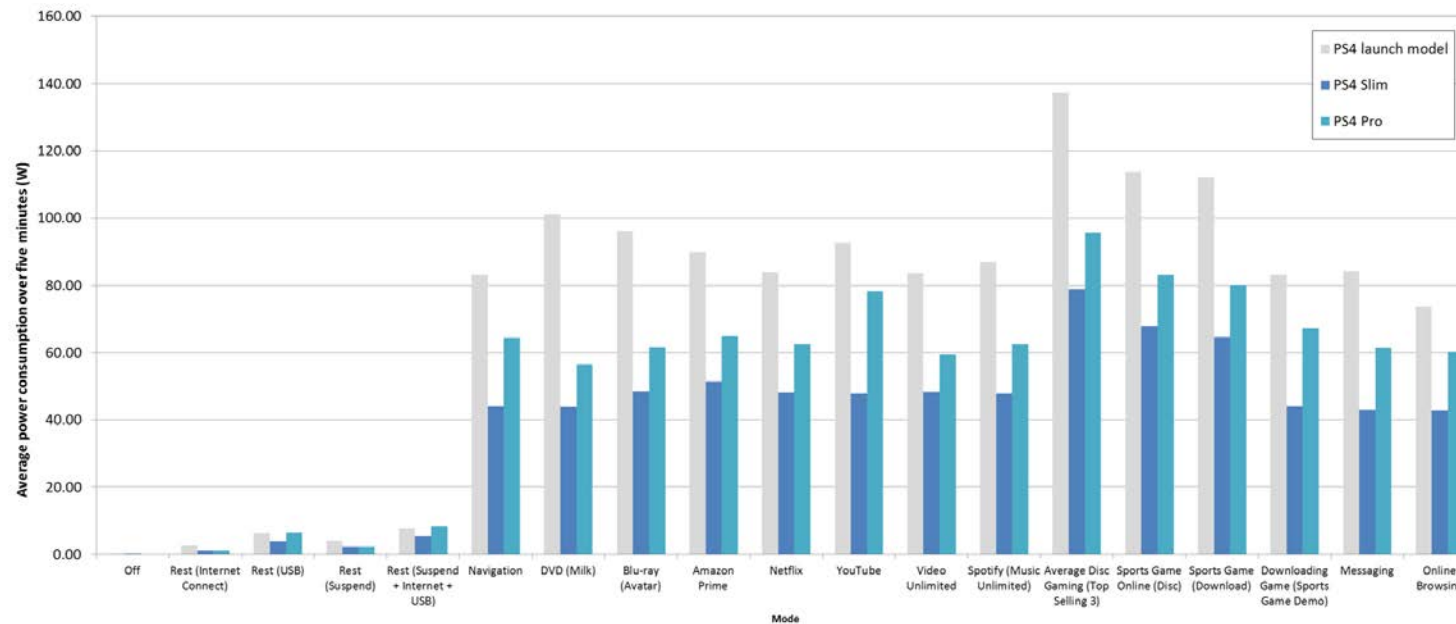


- PS4 power reduction more rapid than PS3 *
- 150 kWh/yr saving vs business as usual case

*Assuming same usage between consoles



PS4 Pro: 4K gaming console

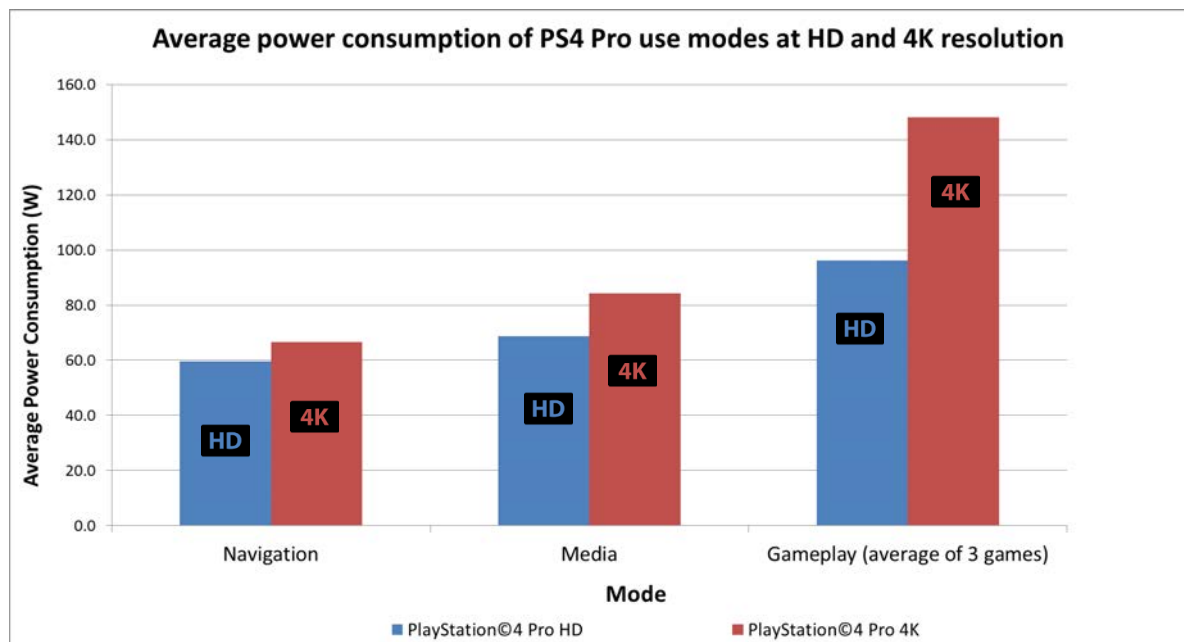


- Launch date 10th November: 4K media and games not yet widely available
- PS4 Pro uses 40% more energy than PS4 Slim, with double the performance*

* PS4 Pro = 4 TFLOPS, 124 kWh/yr (PS4 slim = 1.84 TFLOPS, 89 kWh/yr)



PS4 Pro: allows 4K game play



- PS4 Pro 4K media play 79-89 W
- PS4 Pro has twice the performance of PS4 allowing 4K gaming





Xbox One And Xbox One S

Energy Performance Improvements

Steps to Lower Xbox One Energy Use

Xbox One – Launch 2013 – Improvements over previous generation

- System on a Chip
- Low CPU, GPU, and Memory power states for non-gaming modes
- Clock and power gating
- Background download
- Low power connected standby
- Suspend to RAM: power down without losing progress

Steps to Lower Xbox One Energy Use

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Xbox One S– Launch 2016 – Further Improvements

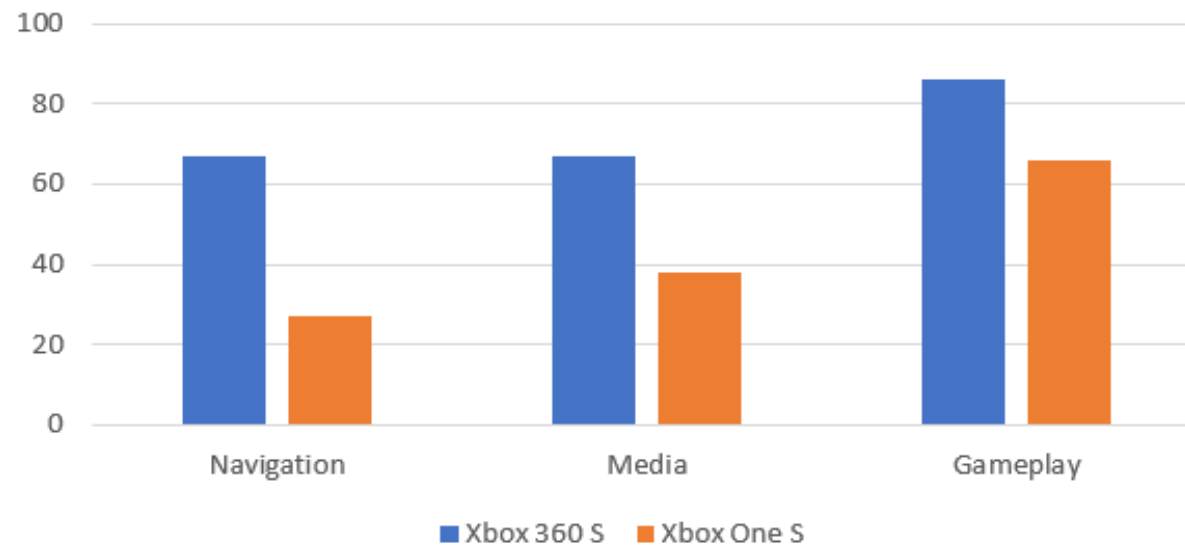
- PSU efficiency increase from 82% to 88% in game mode
- 16nm FinFet System on Chip
- New 4k UHD media playback mode with only 5W increase from base media playback

Xbox One and Xbox One S – Modal Power Comparison

	Home menu	DVD playback	Blu-ray playback	1080p streaming	Default auto-power down time setting
	watts	watts	watts	watts	Minutes
Xbox One	61	68	69	63	60
Xbox One S	27	33	33	32	60

Xbox One S power consumption is less than Xbox 360 S for similar functions

Average Power Consumption of Xbox 360 S and Xbox One S*



*Compares most efficient Xbox 360 with Xbox One S

Xbox One S Connected Standby Power Improvements

Xbox users are offered choices for energy use on standby mode. Improvements since launch shown below.

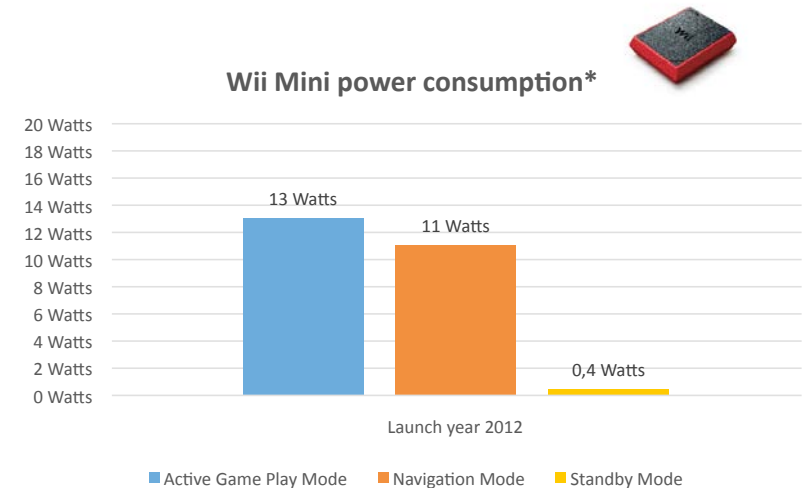
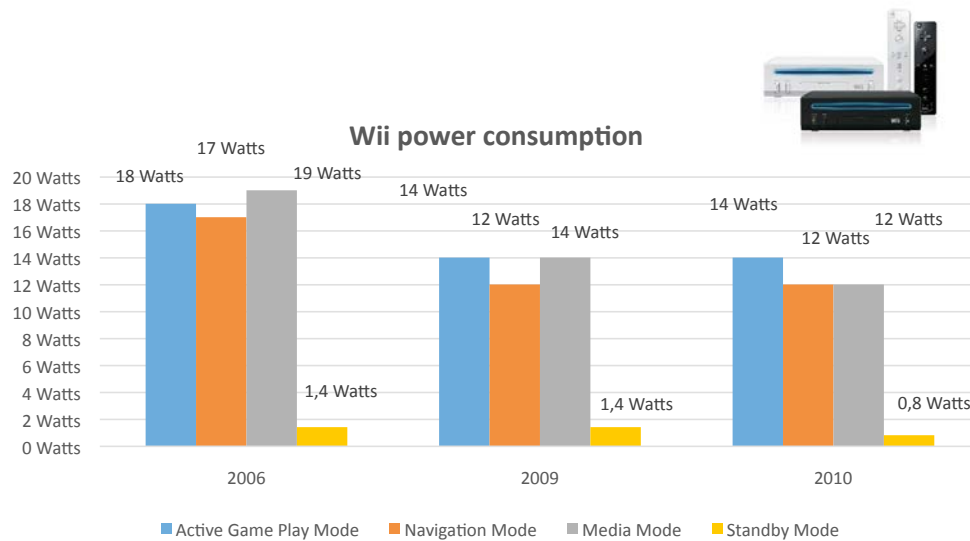
	Energy-saving Mode watts	Connected Standby watts
Xbox One 2013	0.48	18
Xbox One S 2016	0.40	8

Console starts in 45 seconds with button push. Downloads performed after power-up.

Console starts in two seconds. Provides background downloads

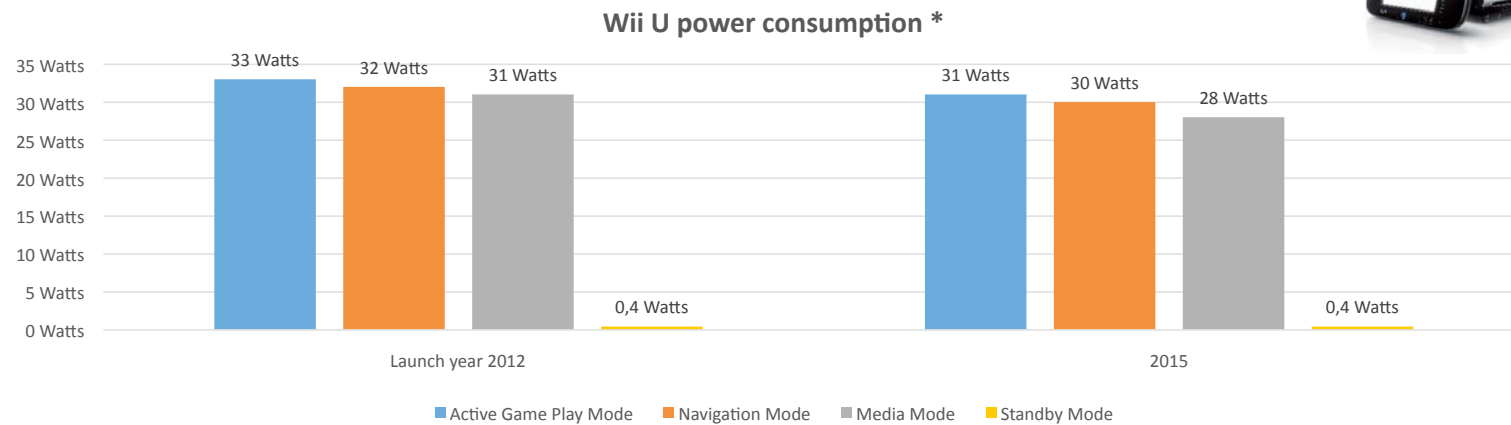


Previous Generation Nintendo Console Power Consumption



* The Wii Mini doesn't include media playback features

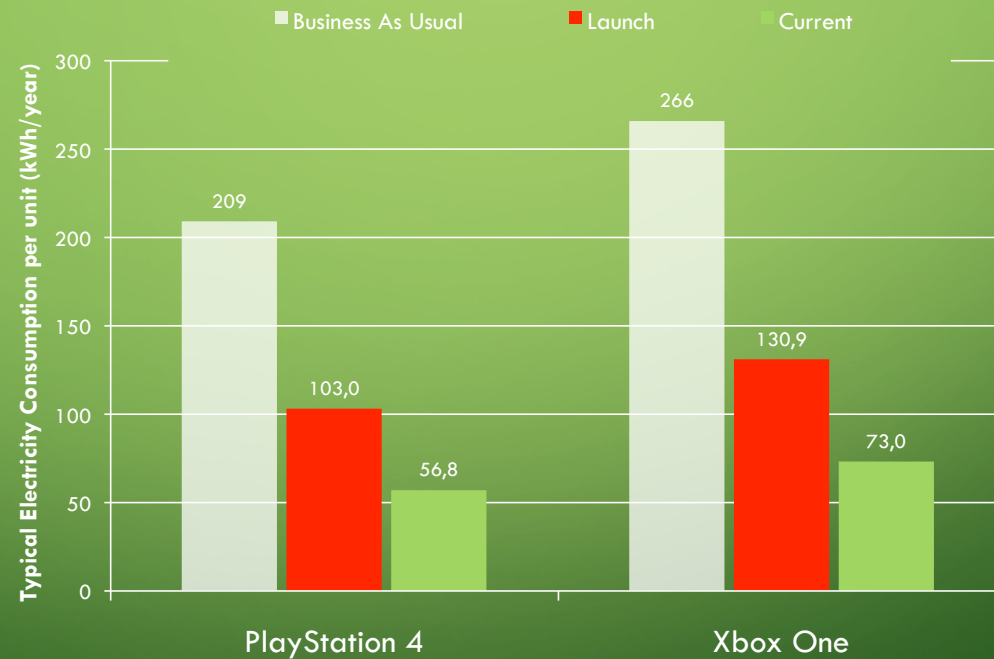
Nintendo Wii U Power Consumption



*The Wii U has automatic power down capability that is enabled by default, with a delay of 1 hour for game play and 4 hours for media streaming

UPDATE FROM THE SIGNATORIES

Estimated electricity reductions for ultra-high definition consoles vs BAU cases

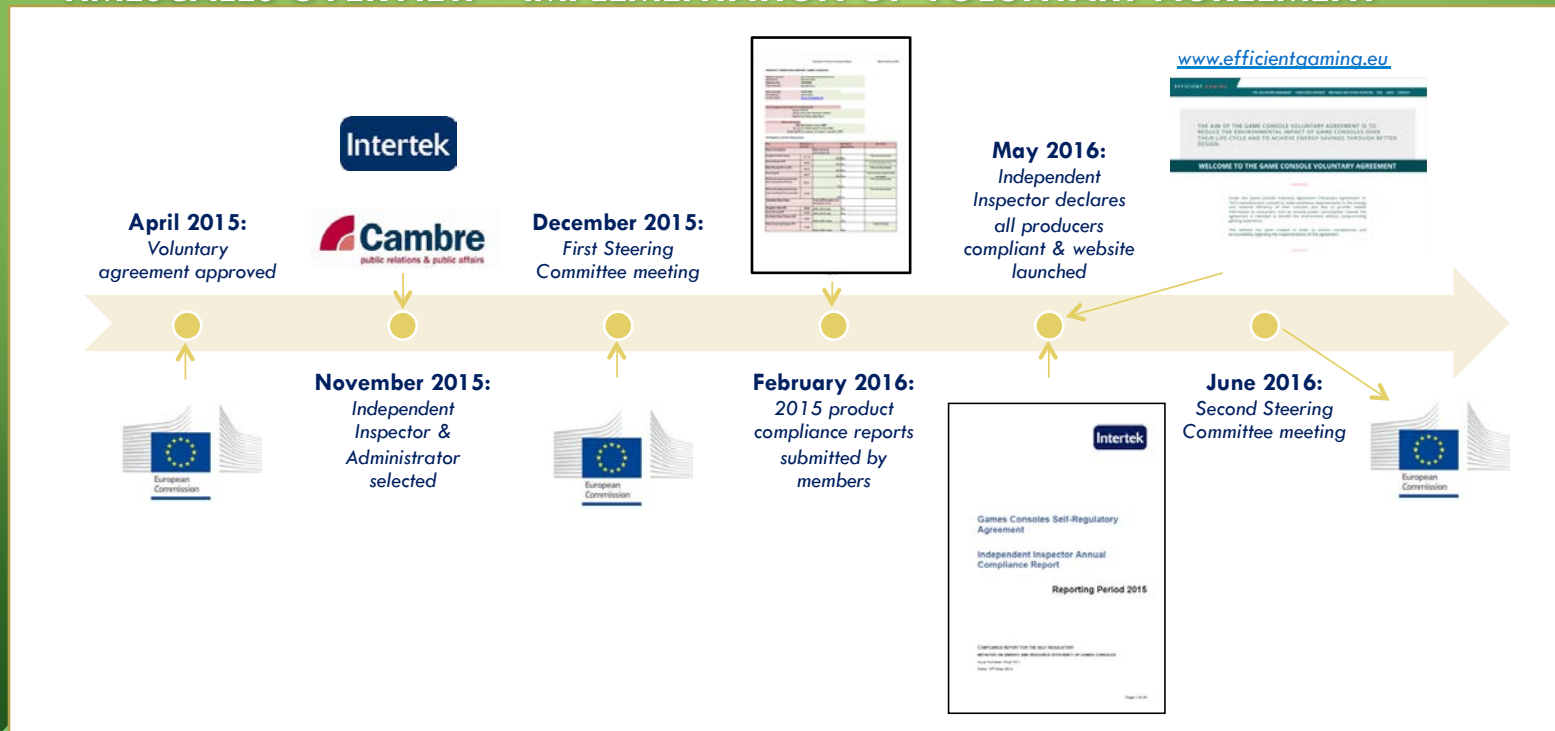


Annual electricity reduction per 9 million sold = 1.5 TWh

Assuming 37 million installed base by 2020 = 5.9 TWh electricity use reduction

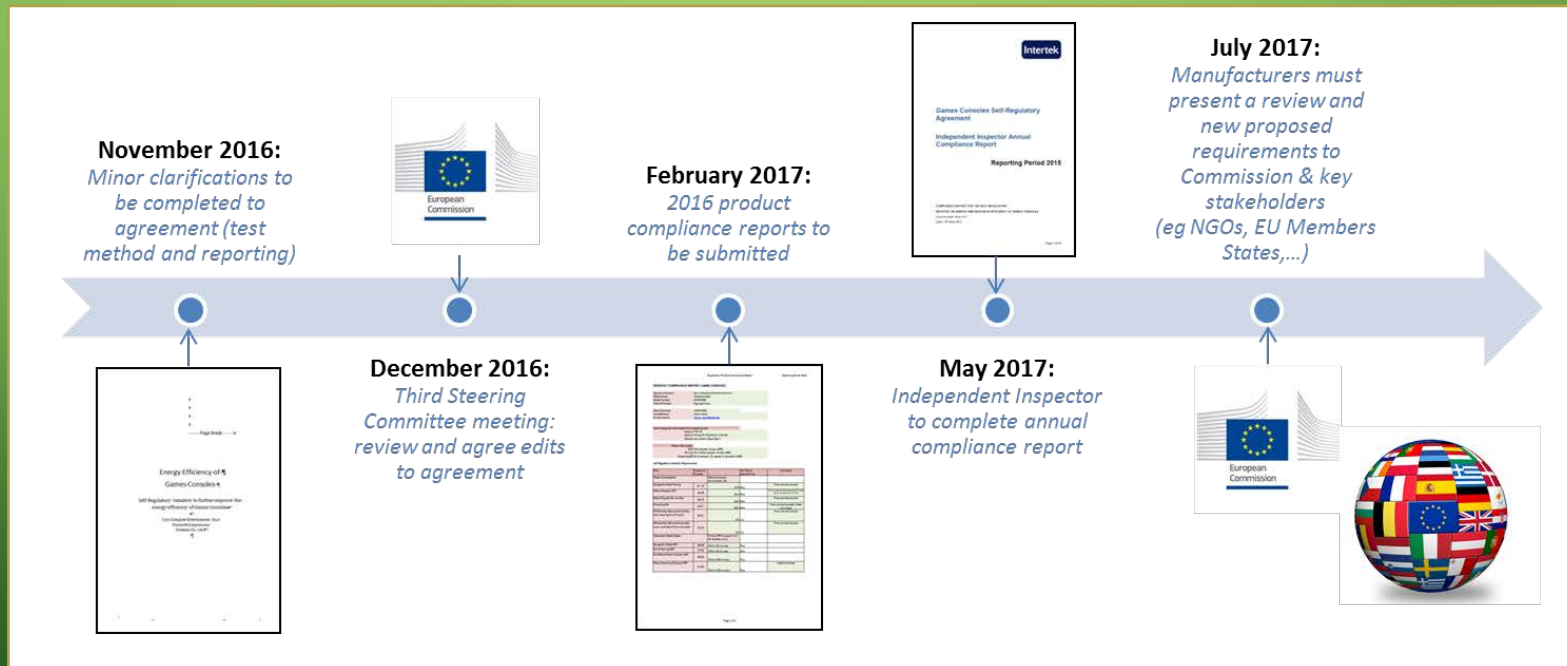
UPDATE FROM THE SIGNATORIES

TIMESCALES OVERVIEW – IMPLEMENTATION OF VOLUNTARY AGREEMENT



UPDATE FROM THE SIGNATORIES

TIMESCALES OVERVIEW – VA REVIEW AND CONTINUED VA IMPLEMENTATION PLANNED IN 2017



UPDATE FROM THE SIGNATORIES

VA 2016 REVISION

- Improvements were highlighted by both Signatories and Independent Inspector
- These revisions allow for a more efficient application of the VA:
 - Corrected minor grammatical and formatting edits
 - Removed redundancies and unnecessary text
 - Clarified some procedures (e.g. data collection, review and testing)
 - Revised dates relating to the submission of product compliance reports and the independent inspector's annual compliance report
 - Improved product compliance report template



UPDATE FROM THE SIGNATORIES

THE VA 2017 REVIEW WILL CONSIDER THE FOLLOWING:

Summary of compliance results

Assessment of overall energy savings (>1 TWh/year by 2020)

Review of planned future game console technology

Review of possible energy performance benchmark

Review of non-energy requirements (e.g. material efficiency)

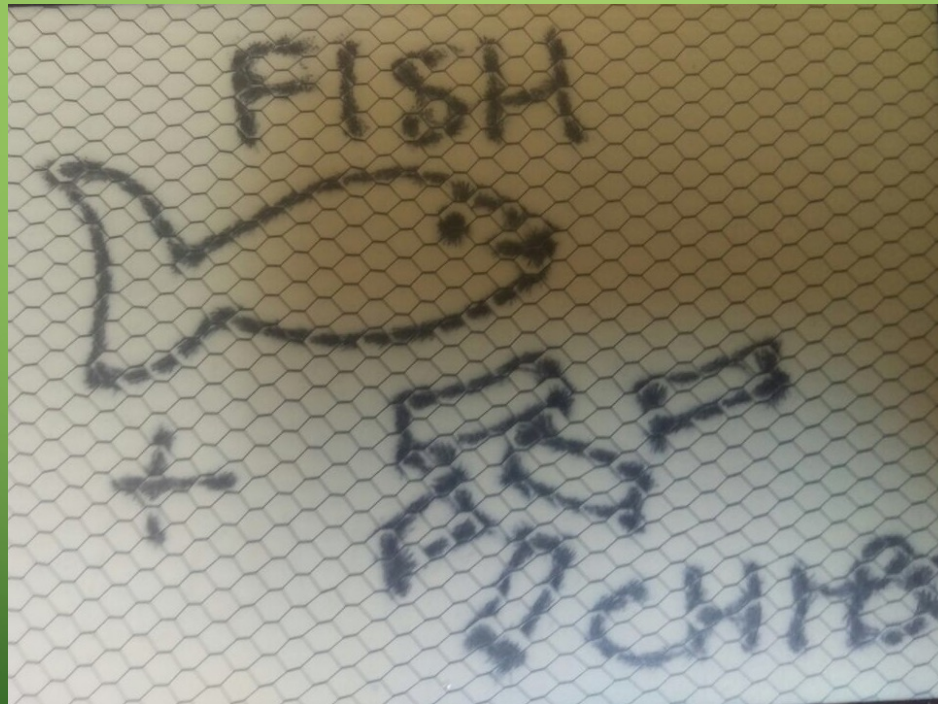
Recommendations for future commitments



Circular Economy: Review underway

- Review of circular economy proposals and studies underway, including:
 - JRC Technical Report: Feasibility study for setting-up reference values to support the calculation of recyclability / recoverability rates of electr(on)ic products
 - NL Ministry Environment/Eco-design - Marking requirements for EEE items (relevance and feasibility)- Recycled content- Strategic metal recycling
 - CEN-CENELEC-ETSI work programme in response to m/543 on material efficiency - BT154/DG10216/INF
 - Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions closing the loop - An EU action plan for the circular economy
 - IEE1680.1, 4.3.1.6 JRC Science and Policy Report: Environmental footprint and material efficiency support for product policy
 - Commission Regulation (EU) no .../2015 of xxx Implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to eco-design requirements for electronic displays and repealing regulation 642/2009 with regard to eco-design requirements for televisions
 - OCAD3E Waste electrical and electronic equipment authorised coordinator agency technical report: Application of environmental contribution modulation criteria
 - EU GPP Guidance for the purchase of computers and monitors
- Our Voluntary Agreement already contains a number of requirements included in these parallel proposals.

LUNCH BREAK



UPDATE FROM THE EUROPEAN COMMISSION

- Adoption of 2016 Consoles VA revision
- VA Guidelines

AOB AND DATE OF NEXT STEERING COMMITTEE MEETINGS (2017)

- Thursday 1 June 2017 - TBC
- Schedule for further meeting?

END OF MEETING