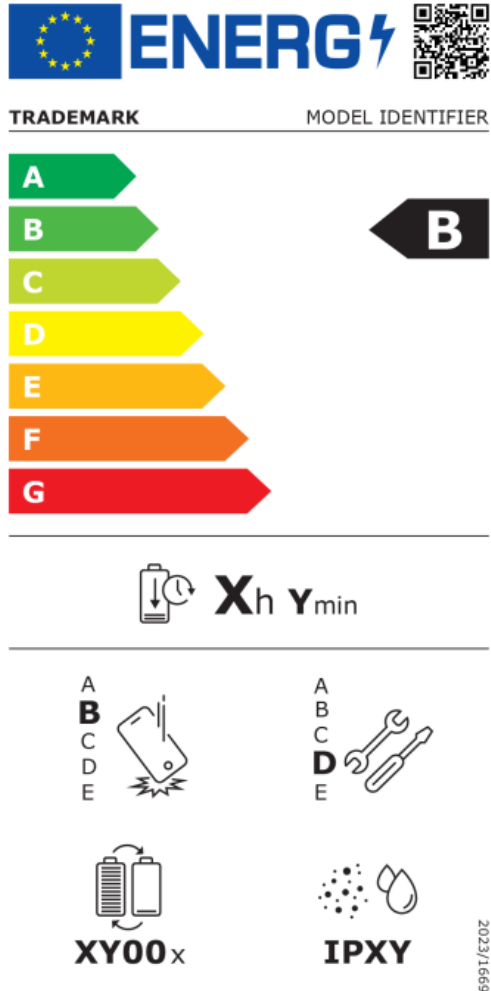# SmartViser Overview Energy Labelling

# EU Energy Labelling

Eco Design* and Energy Labelling* EU Commission Regulations were published on 20/09/2023

20 June 2025

**Energy Label Regulation will be mandatory**

Any devices placed in the market after 20th of June 2025 will require Energy Label
**Even if the Brand/Model was launched before that date!**

**TRADEMARK** — MODEL IDENTIFIER

$X_h \, Y_{min}$

**XY00$_x$**     **IPXY**

2023/1669

***Eco Design Requirements**: https://eur-lex.europa.eu/eli/reg/2023/1670/oj

***Energy Labelling Regulations:** https://eur-lex.europa.eu/eli/reg_del/2023/1669/oj

# EU Energy Labelling



**Testing with viSer provides the following results**
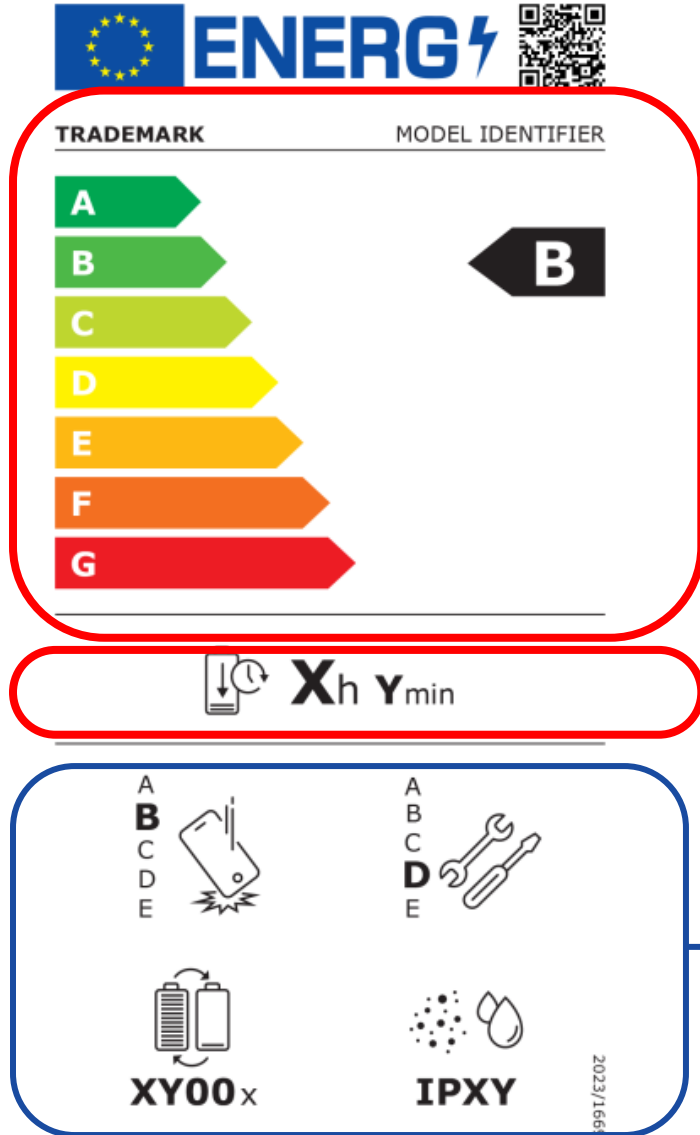
**Energy Class**
**This is calculated with the Energy Efficiency Index score**
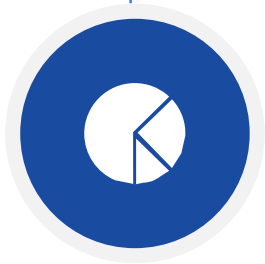
**Battery Endurance**
**How long does it take for the device to go from 100% battery to 0% with the testing loop**

These are self-declared by the smartphone manufactures@
1. Drop Test
2. Repairability Index
3. Battery Charge/Discharge before reaching 80% Battery health
4. Waterproof/Dustproof

# SmartViser EU Energy Label Project - Timeline

## JUN 2021

### Involvement in EU Energy Labeling Program

SmartViser joined the EU Project on defining the testing methodology for battery energy efficiency testing and endurance.

## JUN - DEC 2021

### Testing Methodology

Worked on the testing methodology. Main Criteria Repeatable, Reliable Consistent, close to end user behavior.

## JAN – DEC 2022

### Beta Release Program

Beta Program with several key industry players participating and providing feedback.

## AUG 2023

### viSer EEI Pilot Application

Viser EEI following the updated from the Beta program was released **fully compliant with the published Regulation** Available for iOS and Android.

# Energy Label and Battery Endurance Calculation - Testing Procedure

## 1.2.1. Test sequence for smartphones

**From 100 % battery charge level to power off: repeat a cycle of:**

- Phone call (4 min)
- Idle (30 min)
- Web browsing (9 min)
- Idle (30 min)
- Video streaming (4 min)
- Gaming (1 min)
- Idle (30 min)
- Data transfer: http upload and download (8 min)
- Idle (30 min)
- Video playback (4 min)

When device powers off: Terminate test.

## 1.2.2. Test sequence for slate tablets

**From 100 % battery charge level to power off: repeat a cycle of:**

- Gaming (5 min)
- Idle (66 min)
- Web browsing (11 min)
- Idle (66 min)
- Video streaming (6 min)
- Idle (66 min)
- Data transfer: http upload and download (2 min)
- Idle (66 min)
- Video playback (6 min)
- Idle (66 min)

When device powers off: Terminate test.

**EEI Test Specifications Excel document**
https://ec.europa.eu/docsroom/documents/52518

# EEI Test Specifications Excel Document



**EU Excel test specification Contains Three Tabs**

**1** **Network Simulator Set up**

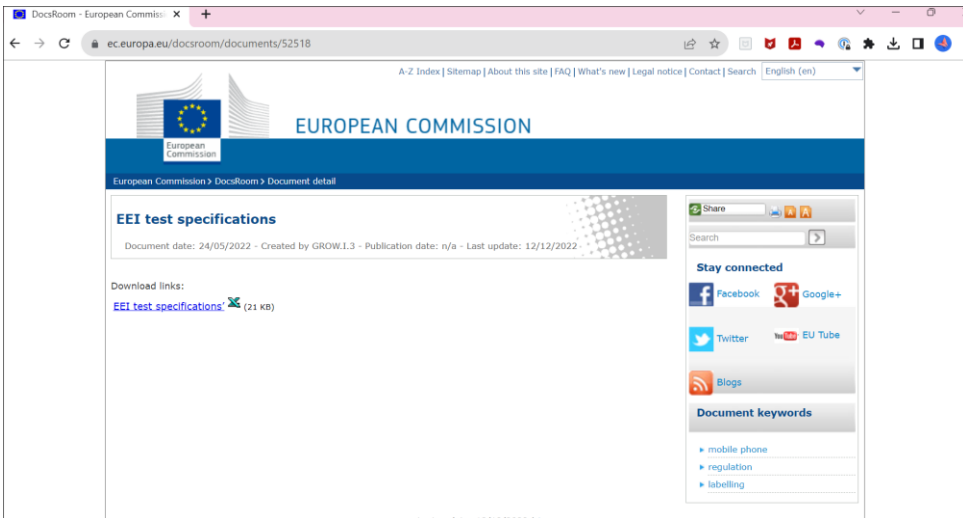Information like LTE Band RSRP and RSRQ Levels

**2** **Device Set up**

Settings like media volume, screen brightness, screen timeout (Around 38 settings)

**3** **Use Case Set up**

viSer EEI Application already configured to this set up

*Table 1a: Energy efficiency classes of smartphones*

| Energy Efficiency Class | Energy Efficiency Index (EEI) |
|---|---|
| A (most efficient) | EEI > 2.70 |
| B | 2.30 < EEI ≤ 2.70 |
| C | 1.95 < EEI ≤ 2.30 |
| D | 1.66 < EEI ≤ 1.95 |
| E | 1.41 < EEI ≤ 1.66 |
| F | 1.20 < EEI ≤ 1.41 |
| G (least efficient) | EEI ≤ 1.20 |

$$\frac{END_{Device}}{U_{nom} \times C_{rated}} \times 1000$$

# Testing Process Overview – Smartphone Example

## Controlled Environment

### viSer EEI App

### Network Simulator
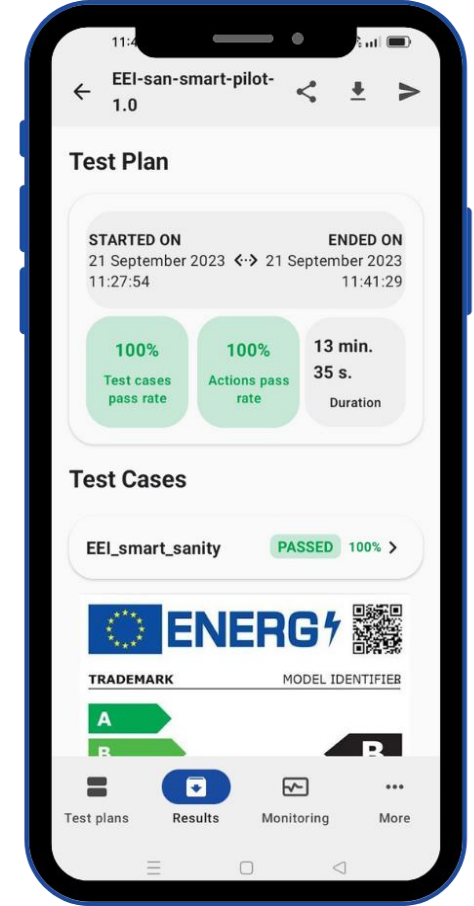
### Detailed Set up of all parameters

**EEI Test Specifications Excel document**

https://ec.europa.eu/docsroom/documents/52518

## Device Test Protocol



- Phone Call (4min)
- Idle (30min)
- Web browsing (9min)
- Idle (30min)
- Video Streaming (4min)
- Gaming (1min)
- Idle (30min)
- Data Transfer (8min)
- Idle (30min)
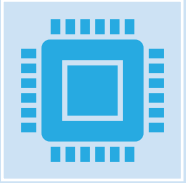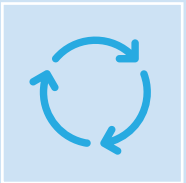- Video Playback (4min)

## Result Data (*)

(*) viSer results on Device, more available on SmartViser Analytics

# Key Points

**The energy efficiency index** should be calculated with the operating system version installed on the product model at the date of placement on the market.

For the lifespan of the product, if an **updated version** of the operating system is installed on the same product model, the **energy efficiency index should be recalculated** and, where applicable, the value of any other parameter of the label and of the product information sheet should be reassessed.

Any change in the energy efficiency index, or where applicable in any other parameter value part of the label and of the product information sheet, should be considered relevant, in particular when this change is detrimental for the end users and **label should be revised**

# European Product Registry for Energy Labelling

## Final rating of the devices available and displayed on the EU website "EPREL"
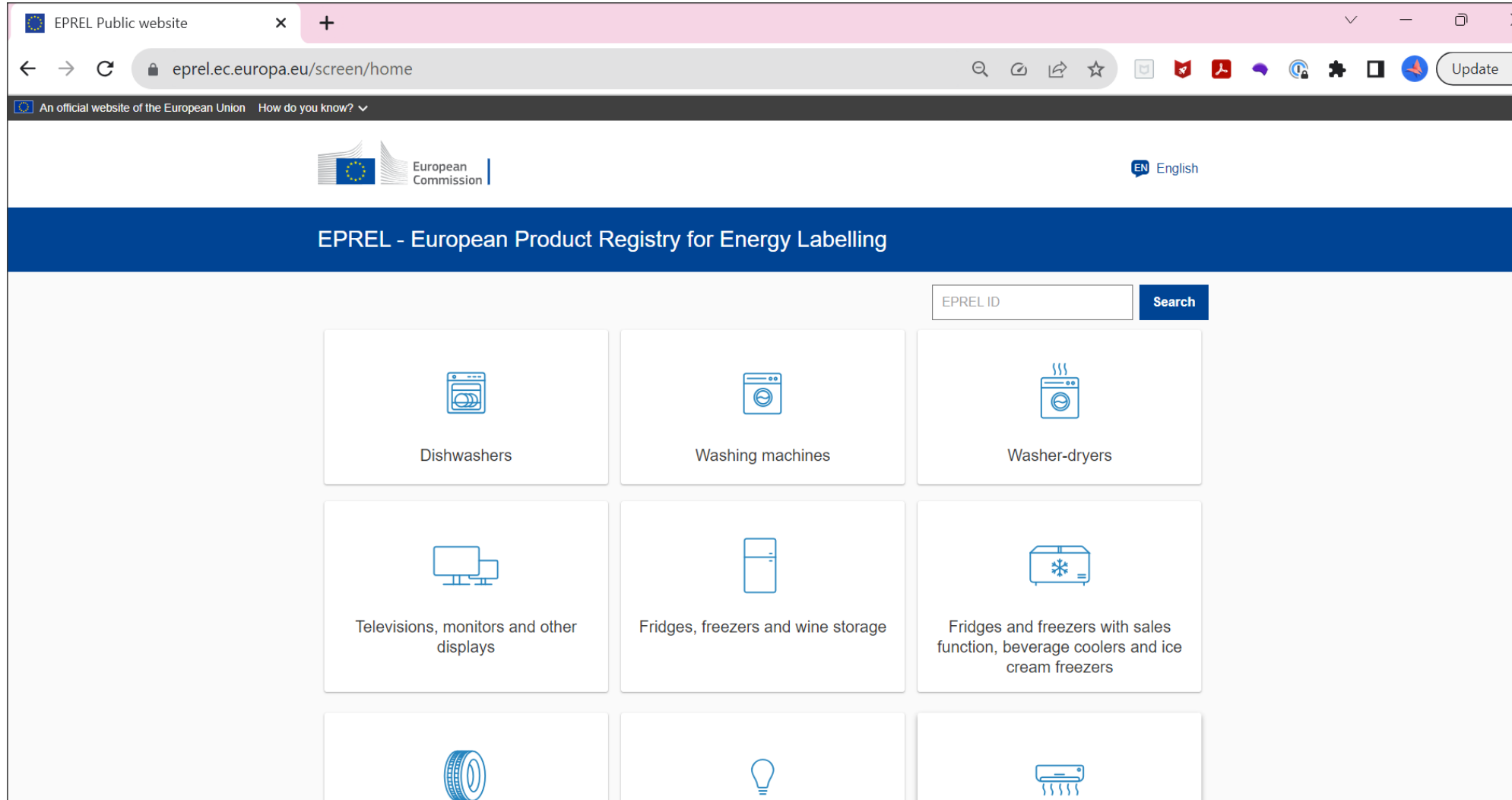
# Test setup : already deployed and up & running

| Parameter | Value |
|---|---|
| Technology | FDD LTE |
| LTE Category | CAT 3 |
| RF Band | Band 3 FDD |
| DL EARFCN | 1575 |
| UL EARFCN | 19575 |
| RSRP | -90 dBm |
| RSRQ | -10 dB |
| Tx Power | 10 dBm |
| DL modulation | 64 QAM |
| UL modulation | 16 QAM |
| Bandwidth | 20 Mhz |
| MIMO | 2 x 2 |
| Audio codec | AMR WB - 12.2 |
| Audio mode | Loopback |
| Tx Power | 10 dBm (PUSCH/PUCCH) |
| Connected DRX | Enable - Manual |
| Connected DRX On Duration timer | psf6 |
| DRX inactivity timer | psf1920 |
| DRX retransmission timer | psf16 |
| Long DRX Cycle | sf1280 |
| Long DRX Cycle StartOffset | 0 |
| Short DRX | Disable |
| Neighbour cells | band1 / EARFCN 500 / - 110 dBm |
| | band3 / EARFCN 1700 / - 110 dBm |
| | band7 / EARFCN 3200 / - 110 dBm |
| | band20 / EARFCN 6300 / - 110 dBm |
| Paging Cycle | 1280 |
| Idle DRX | Disable |

**37**h **9**min
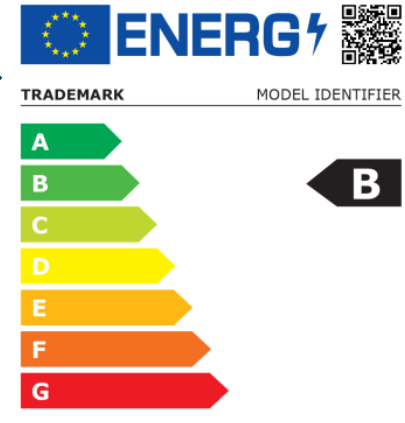
# Detailed Results on SmartViser Analytics studio