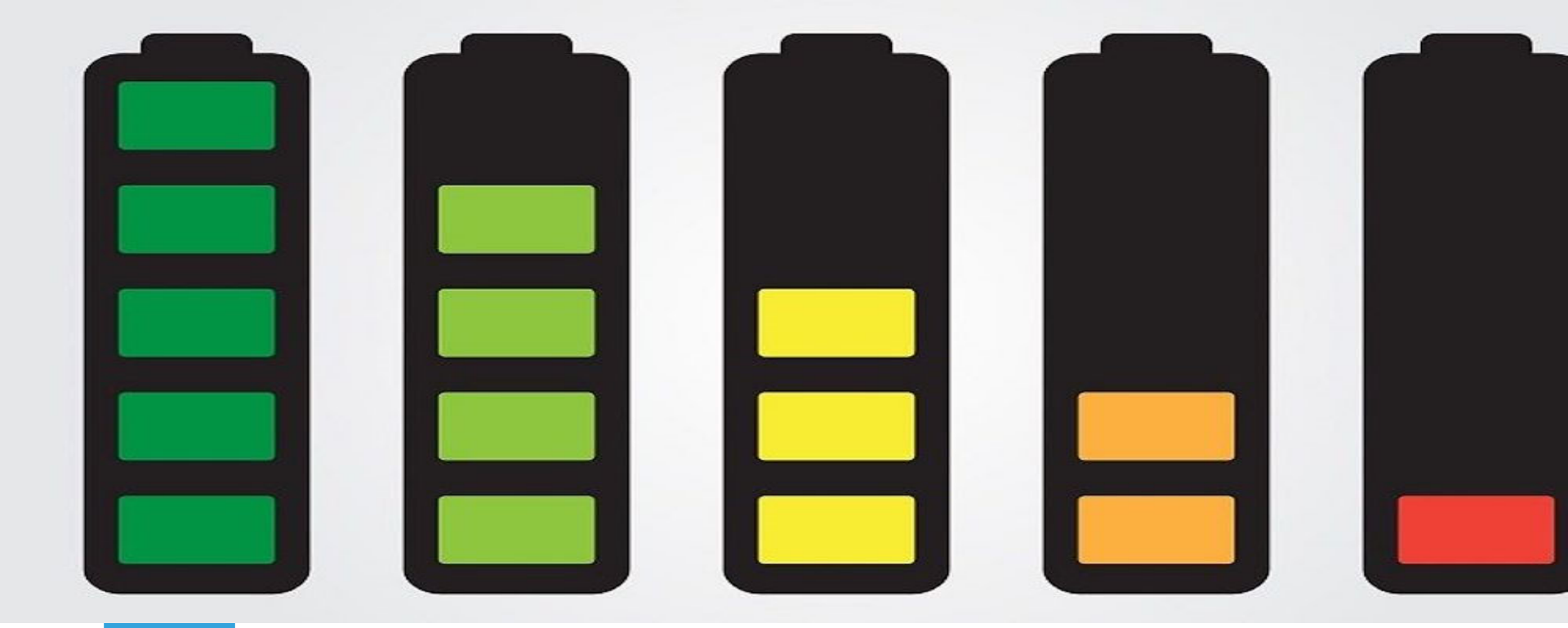

ECODESIGN BATTERIES – TASK 1 SCOPE + TASK 7 ON EXTENSION OF SCOPE OF POLICY PROPOSAL

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SCOPE (DEFINITIONS, STANDARDS AND LEGISLATION) – FOR ECODESIGN

Objectives:

- Provide an **introduction** into **battery technologies**
- Provide **definitions & product categories** to defined the scope and boundaries of the system
- Define the **functional unit of the product** in order to have a consistent Life Cycle Analysis and Cost Analysis later on Tasks 2-6
- Review of existing **standards and legislation,** what are appropriate test standards and gaps

Updates and changes

- **Based on** comments received before the 1st stakeholder meeting were **discussed in the stakeholder meeting** (see Minutes) and based on this an new version was created
- **It resulted** mainly in a **reviewed and updated scope proposal**
- **+ several updates on the text and system definitions**
- -+refers to the **newly elaborated annex on standards complementary to task 1 (will be discussed with policy proposal in Task 7)**

Most relevant changes:

Functional Unit (FU)

What?

the quantified performance of a product system for use as **a reference unit in life cycle assessment studies** (ISO 14040 on life cycle assessment (LCA))

Why?

- **Based on Product Environmental Footprint** (**PEF**) pilot study coordinated by the EC for '**High Specific Energy Rechargeable Batteries for Mobile Applications**' = this study for the sake of compatibility and harmonization of data
- '**functional unit (FU)**' defined as '**1 kWh (kilowatt-hour) of the total output energy delivered over the service life by the battery system (measured in kWh)'**
- Benefit of this approach is outcomes are e.g. €/kWh, CO2-eq/kWh,..

Task 1 also proposed as scope, proposal is:

***Scope*:**

'**high energy rechargeable batteries of high specific energy with lithium chemistries for e-mobility and stationary energy storage (if any)**', hereby:

- **High specific energy** = gravimetric energy density typically **above 100 Wh/kg**
- **High capacity means > 2 kWh**
- **= LiB**

. Refers to **not include power electronics neither heat or cool supply systems for thermal management**.

Rationale:

… **see report**, various opinions of stakeholders, herein also refers to Task 2 for market significance.

+ Refers to **Task 7 to consider scope extension** (see next slide)

Considering a scope extension on proposed policy in Task 7?

See section 7.1.4 in Task 7 report + **Discussion can be done at the end of Task 7**

Options to consider:

- E-mobility batteries below 2 kW?
- Stationary batteries suitable for ESS other than LiB with high energy density?
- Stationary batteries suitable for ESS other than LiB with low energy density?

Opportunities:

- Close loopholes in Regulation (note: it is not an issue for vehicles but might be for ESS)
- create a level of playing field with other competing battery technology
- Create some additional impact (.. But see also Task 2 market expectations)

Challenges:

- Missing test standards with cycles/parameters .. will need to be developed and takes time
- Extra work and administration work for niche applications and SMEs involved
- Other policy tools more suitable; large ESS > machinery directive? small > WEEE and/or Battery Directive?
- Lack of evidence and LCI data for some niche products to perform PEFCR LCA
- .. Delay in policy measures: exhaustive work see Task 3-6, other functional units and requirements involved > inconsistent data, needs larger set of stakeholders consultation,
- .. No kind of policy .. Might be more wise to learn first from a key application before extending to niches?