

# Electricity storage - legal and regulatory framework in Germany

# Presentation & structure

# Speakers



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# Structure

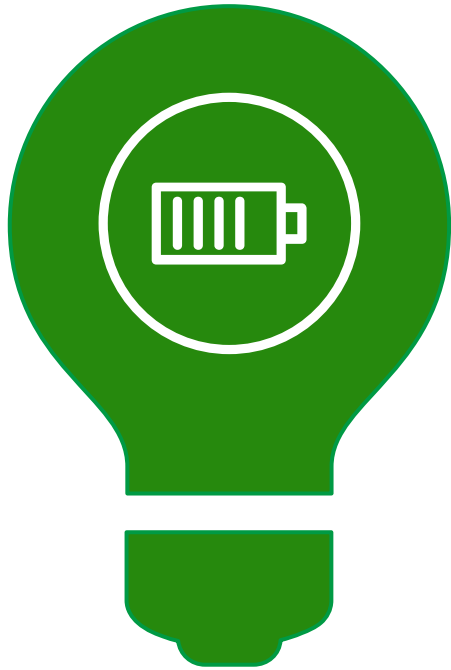
- I. Electricity storage - regulation and the energy law environment
- II. Electricity storage - Permits under public law
- III. Questions & Answers



# I. Electricity storage - regulation and the energy law environment

# Electricity storage - market role and legal framework

A conglomeration of individual standards



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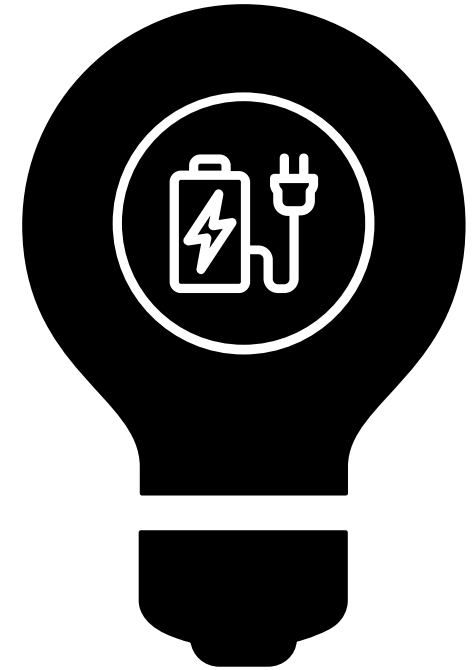
Electricity storage systems are a key component for the electricity market, act as an interface between volatile generation and consumption and make a valuable contribution to the transformation of the energy market.



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**There is currently no uniform legal framework in Germany.**

There are numerous regulations that are relevant for electricity storage.  
There is no systematic and consistent overall concept.



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Rudimentary legal framework for electricity storage opens up opportunities and risks for new business models.

# What is an "electricity storage system" in the legal sense?

It all depends on ....

## Internal Electricity Market Directive

### In implementation of the Internal Electricity Market Directive RL

(EU) 2019/944 ("EBM Directive", with regard to the definition of "energy storage"

cf. Art. 2 No. 59 EBM-RL), a **definition of "energy storage facility" was added to Section 3 No. 15d EnWG.**



## Energy storage system

### § Section 3 no. 15d EnWG: "Energy storage facility"

is an installation in an electricity grid with which the final use of electrical energy is postponed to a point in time later than that of its generation or with which the conversion of electrical energy into a storable form of energy, the storage of such energy and its subsequent reconversion into electrical energy or use as another energy carrier takes place.



## Electricity storage

**In particular, this includes pure electricity storage** (i.e. also battery storage)

cf. Peiffer, in: BeckOK EnWG, Assmann/Peiffer, 7th ed. 2023, § 3 No. 15d marginal no. 1.



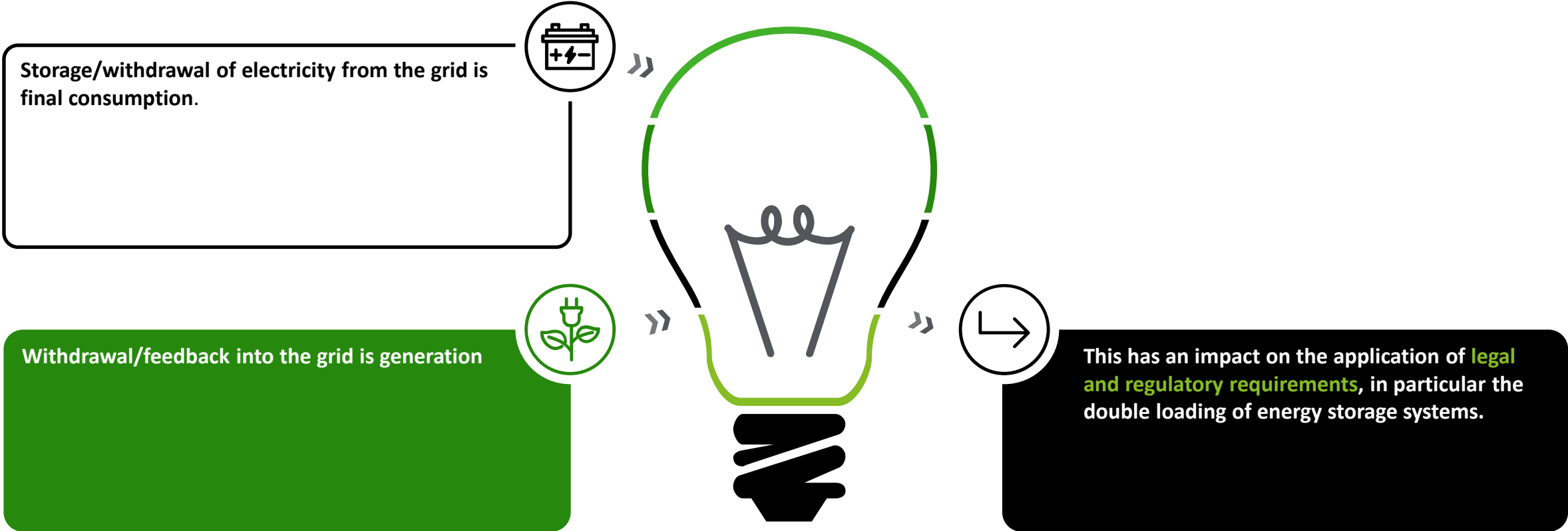
## Further definitions for electricity storage

- Electricity storage, § 2 No. 4e MaStRV
- Installations for the storage (of) electrical energy, Section 1 (4) No. 3 EnWG, Section 118 (3) EnWG
- Hydrogen-based electricity storage, Section 39o EEG 2023
- Stationary battery storage, § 2 No. 9 StromStG
- System or facilities that receive temporarily stored energy that originates exclusively from renewable energies and convert it into electrical energy, Section 3 No. 1 EEG 2023



# Double burden for the electricity storage system

The electricity storage system is a consumer and generator





# Double charge - grid fee

## Conditional exemption of the electricity storage system

### Art. 21 para. 2 lit. b) Directive (EU) 2018/2001 on the promotion of the use of energy from renewable sources ("RED Directive"):

- Obliges the Member States to privilege self-suppliers in the area of renewable electricity - no double levies and charges including grid charges for electricity stored in electricity storage systems.



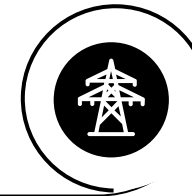
### § Section 118 (6) EnWG:

**Electricity storage systems connected to the electricity grid are exempt from grid charges for a period of 20 years after commissioning.**

Prerequisite:

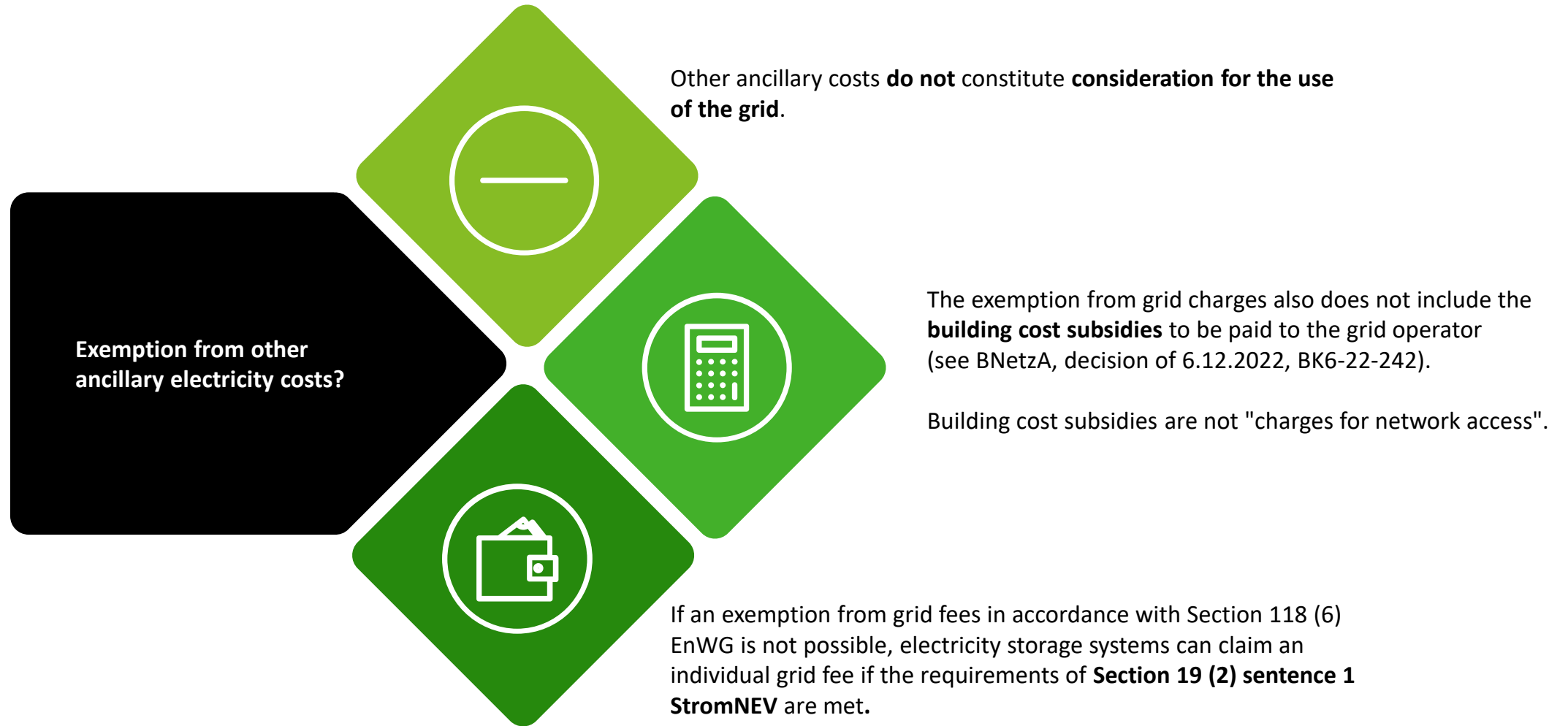
Withdrawn from a transmission or distribution grid and fed back into the same grid with a time delay (see Section 118 (6) sentence 3 EnWG).

- Also applies to storage losses
- no requirement for approval (BR-Drs. 520/12, p. 44).



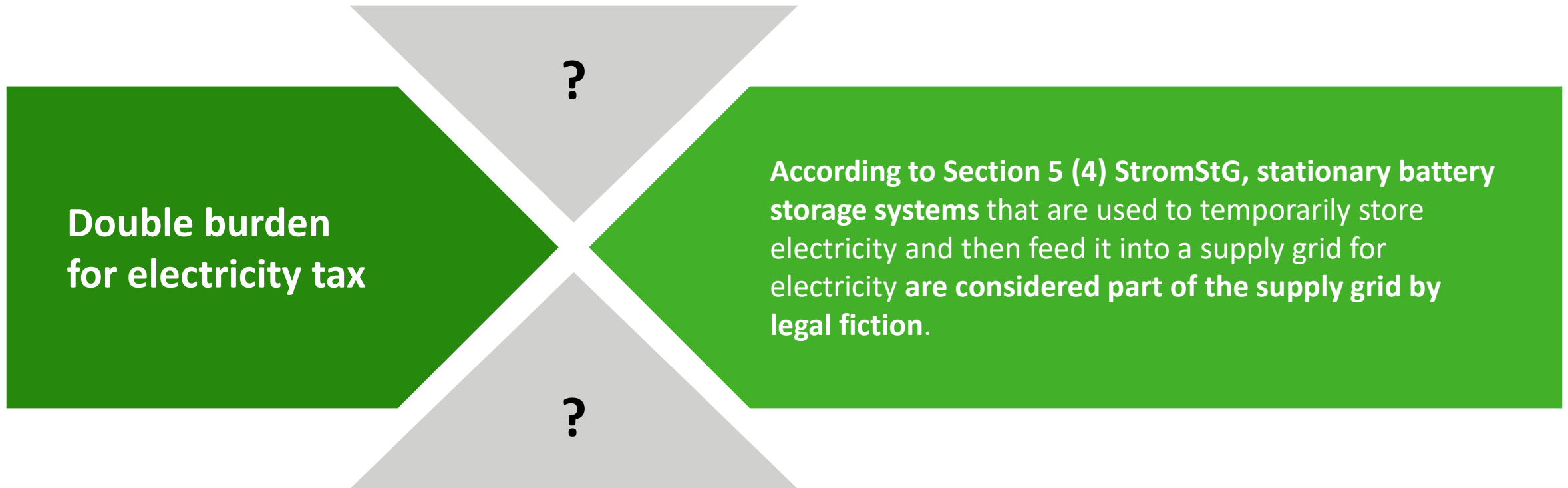
# Double charge - grid fee

## Limits of liberation



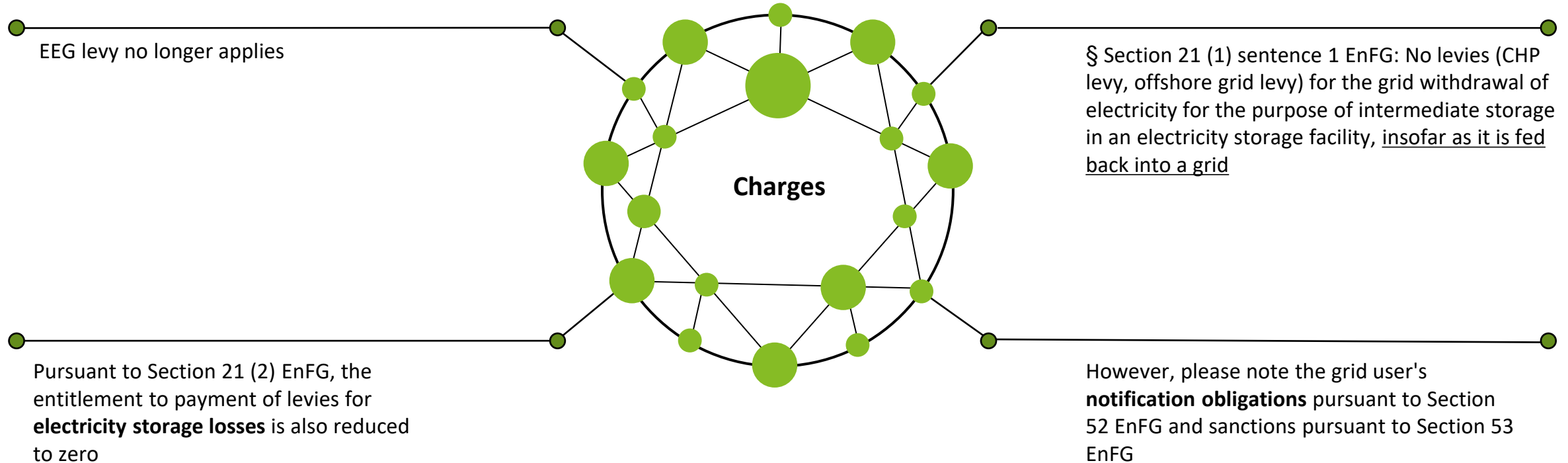
# Double burden - electricity tax?

Legal fiction



# Double burden - levies

## Conditional exemption



# Grid access - claim of the storage system operator

## Privileging the storage of electricity from renewable energies

### Claim

- **Operators** within the meaning of Section 3 no. 2 EEG 2023 **of installations or facilities that receive temporarily stored energy that comes EXCLUSIVELY from renewable energy sources** (Section 3 no. 21 EEG 2023) **and convert it into electrical energy** (Section 3 no. 1 2nd Hs. EEG 2023), **are entitled to immediate and priority grid connection** in accordance with Section 8 (1) EEG 2023 (see Dix, in: Theobald/Kühling, Energierecht, 120 El. 2023, Section 8 EEG para. 13).

### Obligated party

- **The obligated party** is the **grid operator** (Section 3 no. 36 EEG 2023) whose grid serves the general supply, is suitable with regard to the voltage level and is the shortest distance as the crow flies from the location of the system.
- **Note the exclusivity requirement:**  
In the case of large-scale battery storage systems that are connected to the general supply grid in order to absorb the "surplus electricity" there when needed, the exclusivity requirement is unlikely to be met.
- If the storage system is operated in conjunction with a renewable energy system and only consumes electricity from this source, it can be assumed that a **case of exclusivity** exists.

### Mains connection

- In addition to the grid connection claim under Section 8 (1) EEG, operators of systems for storing electrical energy have a claim for grid connection against operators of energy supply grids (Section 17 (1) sentence 1 EnWG).
- Grid operators are obliged to define and publish minimum technical requirements for the design and operation of electricity storage systems (Section 19 (1) EnWG).
- Entitlement to access to the energy supply grids pursuant to Section 20 (1) EnWG
- § 8 (1) EEG 2023 takes precedence over Section 17 EnWG.

# Network access - specific contractual arrangements

## Connection and connection usage contract

In principle, two contracts are concluded:  
the grid connection contract and the connection usage contract

### Grid connection contract

The operator of the battery storage system will usually be the contractual partner in the grid connection contract (with the consent of the landowner if necessary).

It is also conceivable to conclude the grid connection contract directly between the grid operator and the property owner.

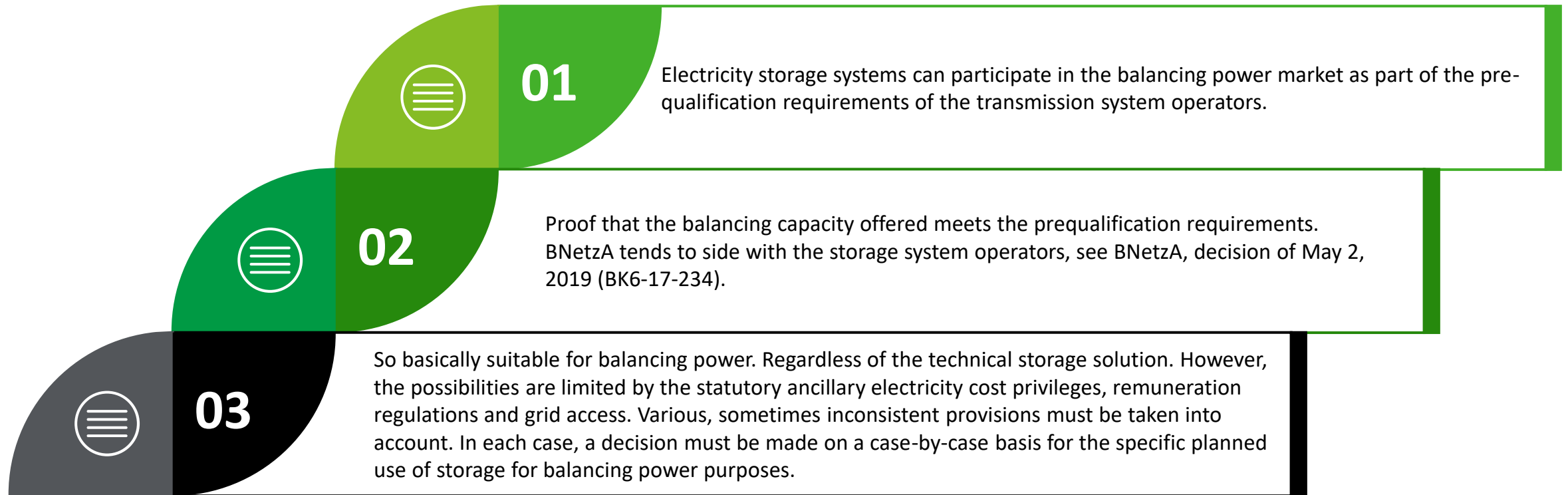


### Connection usage contract

As a rule, only the operator of the battery storage system comes into consideration as the contractual partner of the connection usage contract, because he is the one who uses the connection by feeding energy into or out of the grid.



# Participation of the electricity storage system in the balancing power market



# Remuneration of stored electricity in accordance with the EEG



Operators of installations within the meaning of Section 3 No. 1 EEG 2023 (this also includes storage facilities, see also Section 19 (3) EEG 2023) have a claim against the grid operator **in accordance with Section 19 EEG 2023**

- either to the **market premium** (Section 20 EEG 2023),
- a **feed-in tariff** (Section 21 (1) no. 1, 2, 3 EEG 2023) or
- a **tenant electricity surcharge** (Section 21 (3) EEG 2023)



## **Prerequisite:**

A prerequisite for the entitlement under § 19 Para. 1 is that the electricity is forwarded directly from the generation plant to the electricity storage facility. Therefore, Balance sheet trading in EEG electricity volumes via the general supply grid for the purpose of merely storing electricity volumes in order to claim EEG support is excluded. Rather, the entitlement to remuneration under the EEG remains linked to the actual and physical interim storage of the energy quantities in question (see Stangl, in: Baumann/Gabler/Günther, EEG, 1st ed. 2019, Section 19 para. 20). A spatial connection between the renewable energy system and the battery storage system is therefore required at least for the entitlement to remuneration pursuant to Section 19 (1) EEG.



# Remuneration of stored electricity in accordance with the EEG



Only the amount of electricity that is fed into the grid at the grid connection point is to be remunerated. Conversion and power losses associated with intermediate storage are borne by the system operator

(see Section 19 para. 3 sentence 2 EEG 2023; Wiemer, BeckOK EEG, Greb/Boewe/Sieberg, 13th ed. 2023, Section 19 para. 47).



In the event of **mixed use of** the storage facility for electricity from eligible and non-eligible sources, remuneration of the eligible electricity quantities remains possible, as the wording states that the consideration must be based on electricity quantities rather than storage facilities.

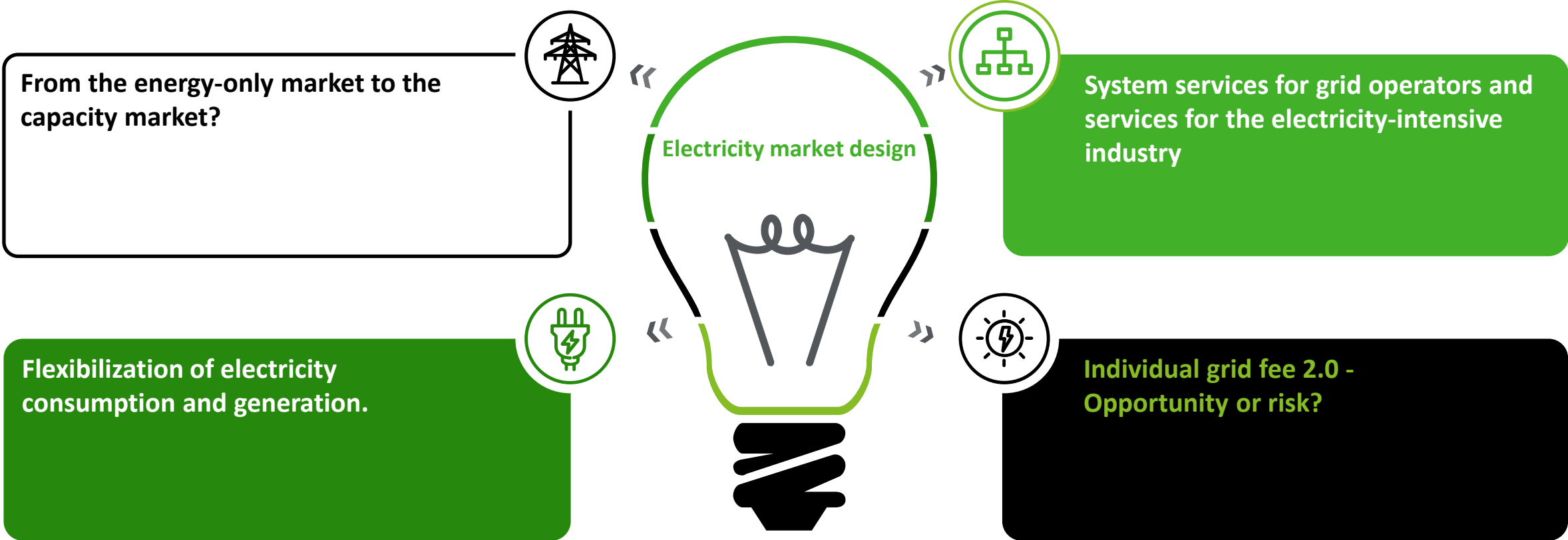
However, conversion and power losses must be allocated proportionally to all electricity quantities fed back out of the storage facility (see Wiemer, in: BeckOK EEG, Greb/Boewe/Sieberg, 13th ed., § 19 EEG marginal no. 47; in part, also Clearing House (see recommendation 2016/12 marginal no. 100 et seq.).



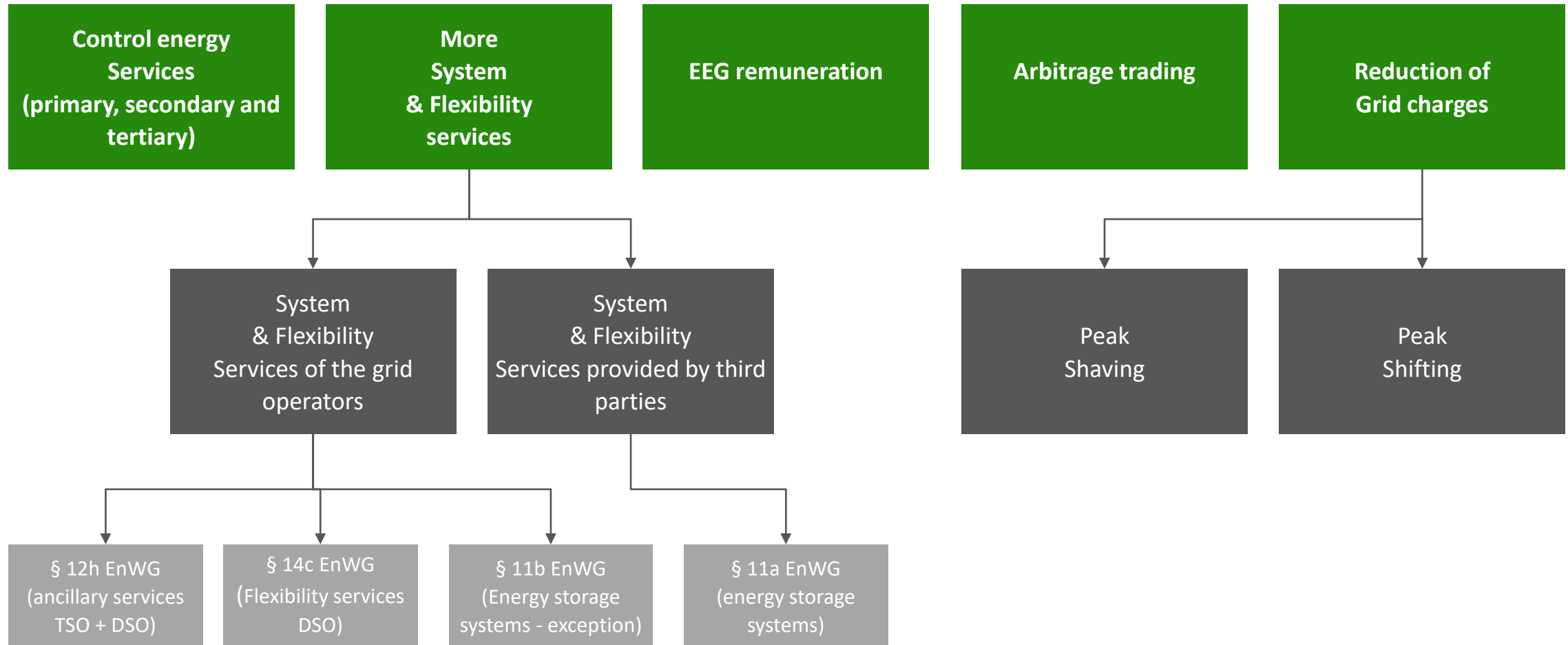
In accordance with Section 21a EEG 2023, it is possible to market the electricity generated in the storage systems directly without claiming payment in accordance with Section 19 (1) EEG 2023 (so-called other **direct marketing**).

This includes any other form of marketing, i.e. any sale to third parties who consume the electricity themselves or in turn resell them (BT-Drs. 18/8832, p. 197).

# Electricity storage in the electricity market design of the future



# Overview of the marketing options for electricity storage systems



# Further regulatory requirements

## Market master data register



### Market master data register



- Operators of electricity storage systems are obliged to register their commissioning in the market master data register, insofar as they are directly or indirectly connected or to be connected to an electricity grid to an electricity grid (**§ 5 (1) MaStRV**). The registration obligation also applies to temporary or permanent decommissioning.

# Further regulatory requirements

## Unbundling



### Principle: Unbundling of grid and energy storage system

According to § 7 (1) sentence 2 EnWG and §§ 8 (2) sentence 4, 10b (3) sentence 3 EnWG, distribution system operators and transmission system operators may not, in principle, own energy storage facilities.

There are two **exceptions**:

- If the energy storage system qualifies as a fully integrated grid component (§ 11b (1) no. 2 EnWG)
- Unsuccessful market test (§ 11b (1) no. 1 in conjunction with (2) EnWG)

This exception must be approved by the regulatory authority.



### Electricity storage

According to the will of the legislator, electricity storage should be part of the competitive markets as far as possible and taken away from the grid operators.

# Further regulatory requirements

## Critical infrastructure



Ordinance on the Determination of Critical Infrastructures under the BSI Act ("KritisV") defines electricity storage as a sub-category of generation plants (Annex 1 Part 1 No. 2.1 KritisV) as critical infrastructures if the following requirements are met:

electricity storage system has an installed net nominal capacity of 104 MW or more;



electricity storage system has an installed net nominal capacity of 36 MW or more if the system is prequalified for the provision of primary control power in accordance with § 2 No. 8 StromNZV;



electricity storage system is contracted as a black start system in accordance with § 3 (2) of the BNetzA decision of May 20, 2020 (ref.: BK6-18-249).



If the electricity storage system is to be regarded as critical infrastructure under these regulations, the operator is subject to the obligations under §§ 8a - 8c of the Act on the Federal Office for Information Security ("BSiG"). This includes, in particular, registration and reporting obligations.

## II. Electricity storage - permits under public law

# Permits and planning law

## Overview



### PLANNING LAW & PERMITS

Special obligations may arise in particular from:

- **Building regulations** (federal state building regulations)
- **Immission control law** (BImSchG)/ Major Accidents Ordinance
- **Planning approval procedure** according to EnWG, if applicable
- **Environmental Impact Assessment Act** (UVPG)
- **Water law**



### STARTING POINT

Different terms depending on the law; not congruent with "energy storage facility", Section 3 No. 15d EnWG

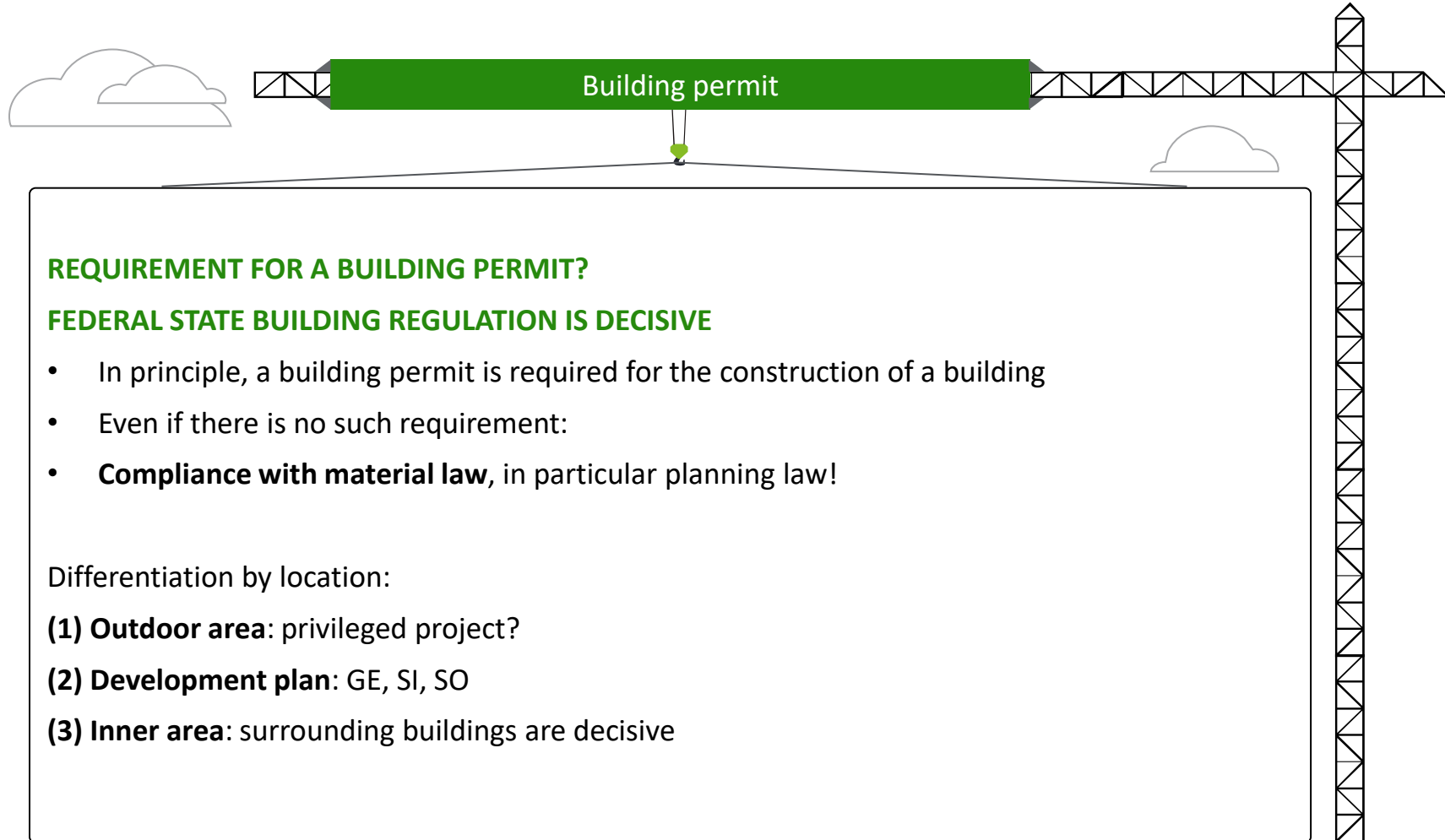
- (Structural) plant
- Project
- Operating range

Different assessment of home storage systems & large storage systems



# Permits

## Building permit



# Permits

## BlmschG & BImSchV



### PERMIT REQUIREMENT

Battery storage systems **do not** require a permit in accordance with the 4th BImSchV

- Section 9.3, Annex 1 to the 4th BImSchV in conjunction with Annex 2, Section 17. Annex 2, No. 17 only applies to hydrogen
- Section 4.1, Annex 1 to the 4th BImSchV also (-) (only encompasses plants for the production of substances for hydrogen & silicon)

Compliance with the requirements for electromagnetic fields (according to 26. BImSchV)



### APPROVAL PROCEDURE

**Approval procedure under incident law may be required**

- Concept of the incident scenario according to 12. BImSchV
- Obligation to notify and, if applicable, obtain approval if threshold values are exceeded
- Additional procedural requirements in accordance with § 23b (3a) BlmschG for hazardous incident installations that fall under the scope of Directive 2018/2001/EU (RED-II)

This also includes **large** battery storage systems (see BT-Drs. 19/27672, p. 20)

# Permits

## Planning approval and other (notification) obligations

### Planning approval procedure under energy law generally not required

The situation is different for large-scale battery storage systems (nominal capacity from 50 megawatts, which are not subject to § 126 BBodG), see § 43 (2) No. 8 EnWG

Right of the project developer to choose whether or not to include the plant in the planning approval process

### No EIA Act obligation

No requirements under **Environmental Impact Assessment Act** for battery storage systems

By reference to UVPG to 4th BImSchV, only hydrogen is covered here too

### Water law notification

For installations in connection with substances hazardous to water, § 40 (1) AwSV

# III Q & A



**Thank you very  
much**  
for your attention

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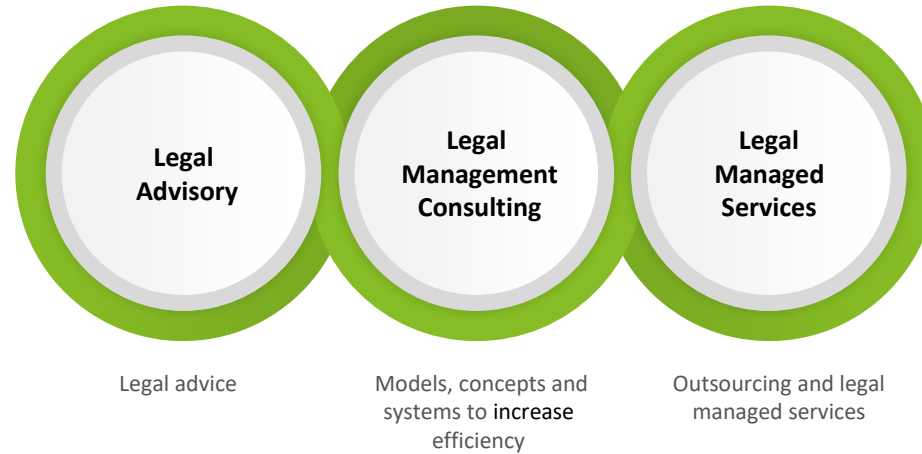
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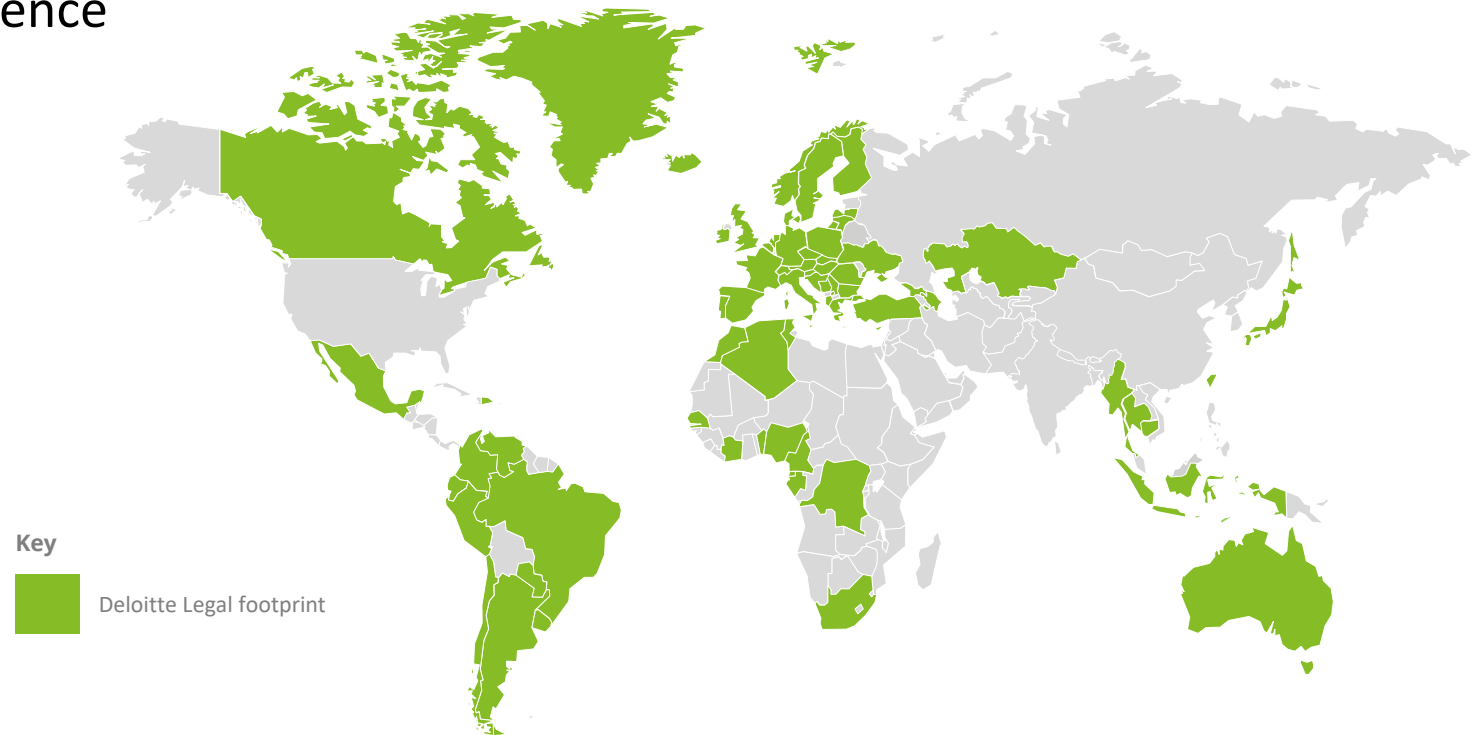
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