

Pripravenosť batériových riešení na trh a trhu na batériové riešenia

Konferencia
Smart metering/ smart grid

Bratislava, 24.11. 2021





EURÓPSKA ÚNIA
Európsky fond regionálneho rozvoja
OP Integrovaná infraštruktúra 2014 – 2020

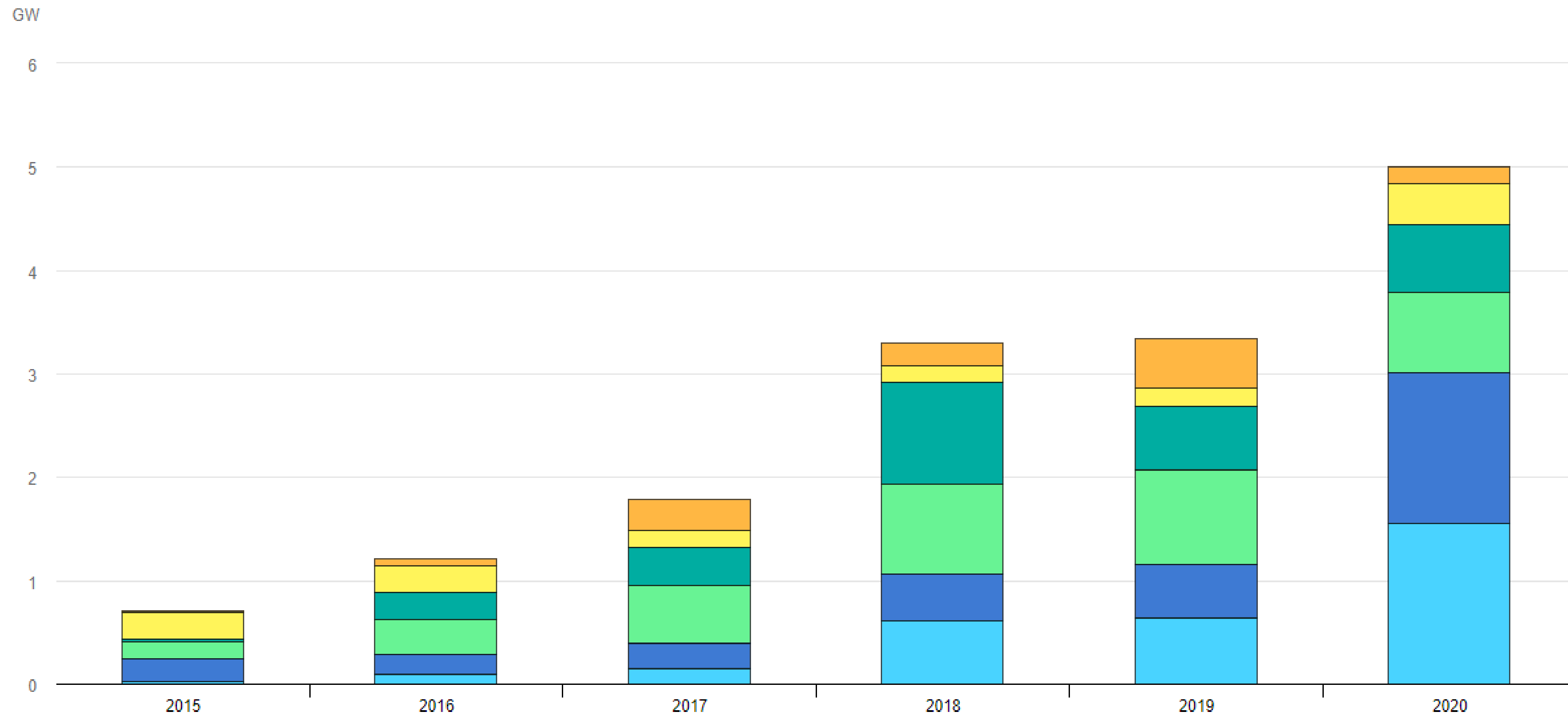
Aktivity **Slovenskej batériovej aliancie**
sú spolufinancované zo zdrojov Európskej únie



Ročné inštalácie energy storage vo svete

Annual energy storage additions by country, 2015-2020

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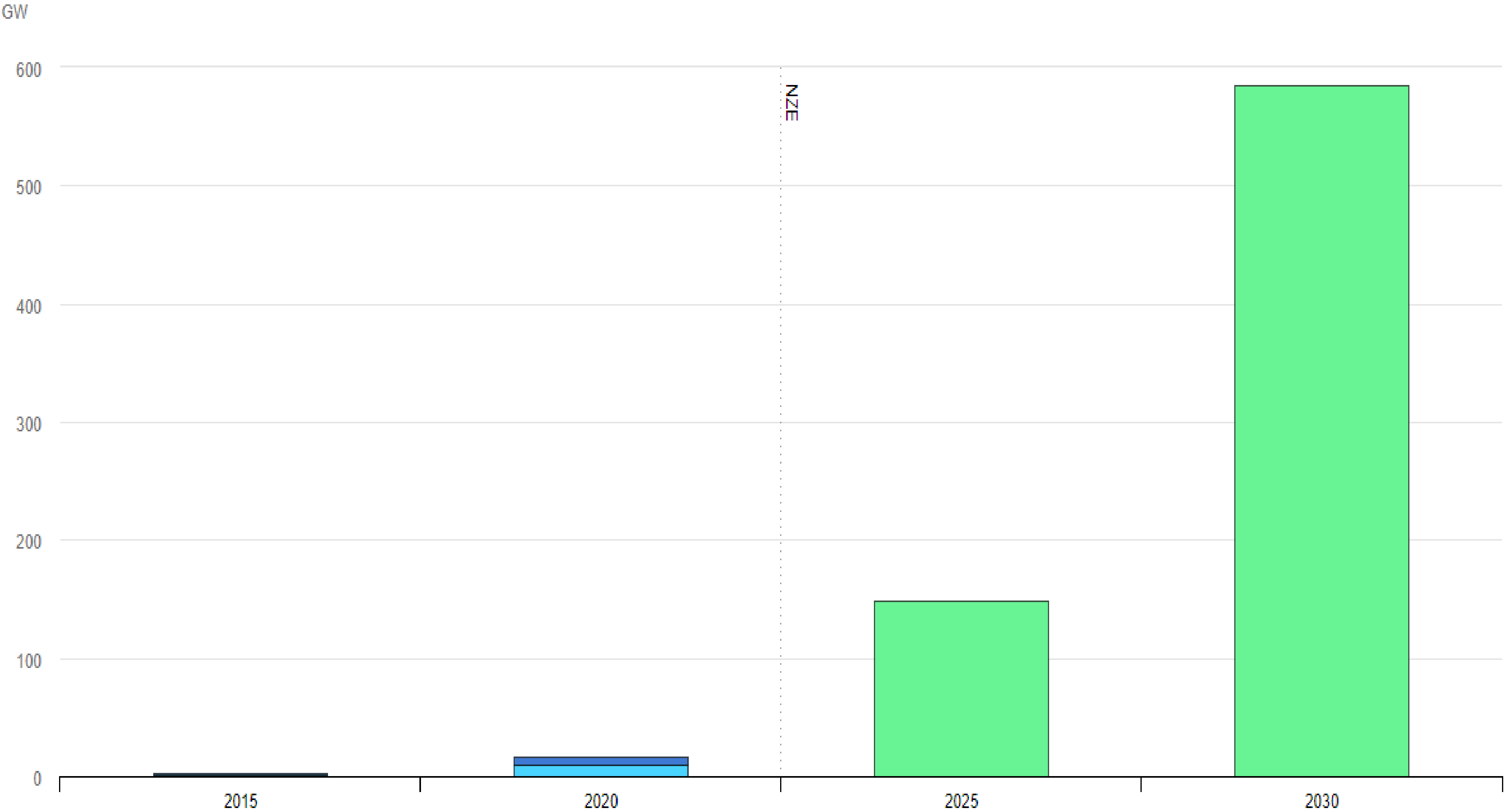


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● China ● United States ● Europe ● South Korea ● Japan ● Rest of the World

Celková potřeba BESS pre Net Zero Scenario

Total installed battery storage capacity in the Net Zero Scenario, 2015-2030



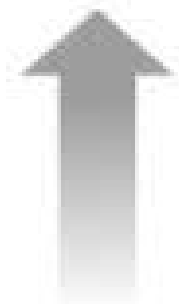
Energy storage v Európe

EMMES 5.0 market data and forecasts

Electrical energy storage*

8.3 GWh

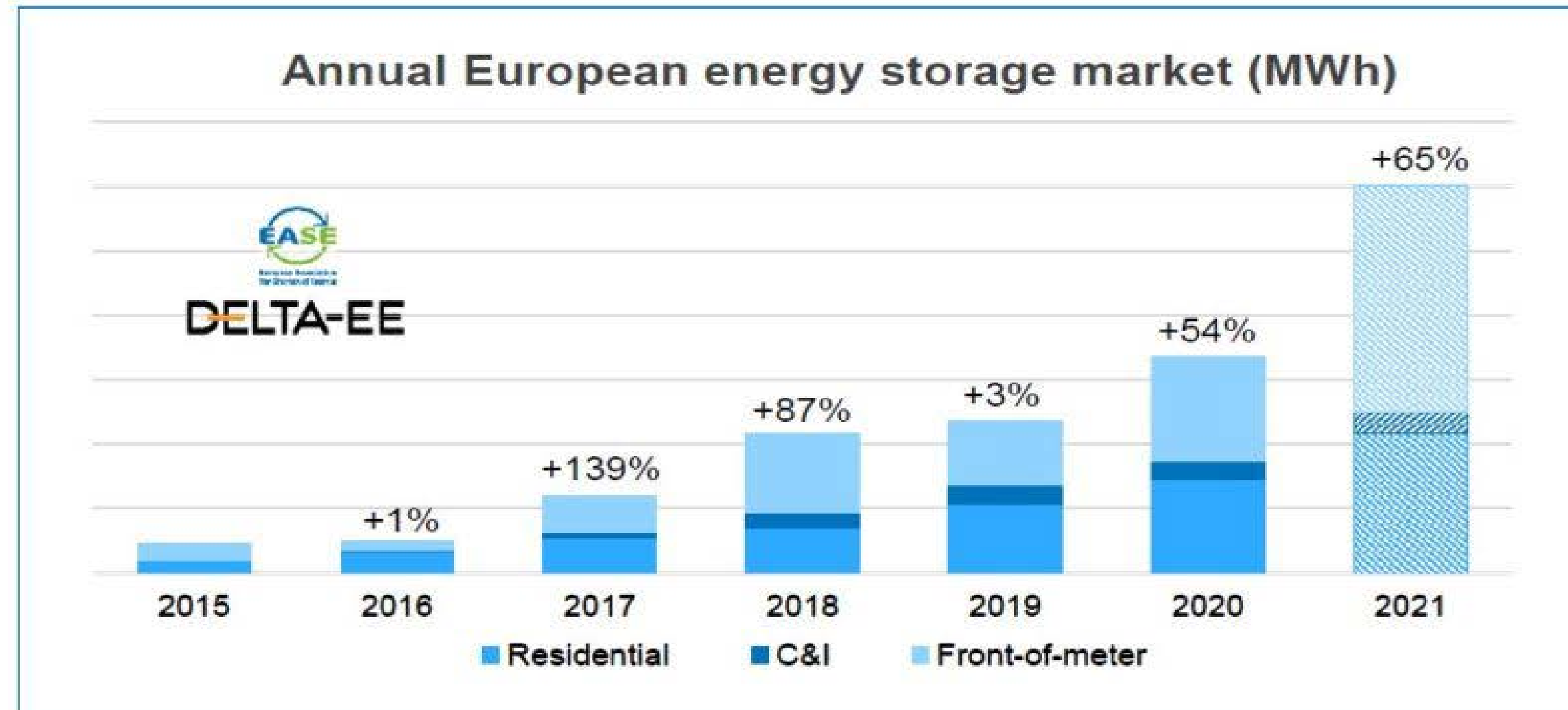
2021



0.6 GWh

2015

Cumulative
installed base



4 Európske trendy v energy storage v roku 2020

1. Prevažujú projekty „Front-of-Meter“ ako príprava na inštalácie obnoviteľných zdrojov
2. Otvárajú sa nové možnosti v aplikáciach batériových úložísk
3. Členské štáty EU pokračujú v reformách a zavádzaní „Clean energy package“
4. Inštalácie „Behind-the-Meter sú značne negatívne ovplyvnené COVID-19

Energy storage aplikácie



Generation Support Services Bulk Storage Services

Arbitrage

Ancillary Services RES
Support

Electricity Supply Capacity

Capacity Firming

Support to Conventional
Generation

RES Curtailment
Minimisation

Seasonal Arbitrage

Services to Support Transmission Infrastructure

Transmission Grid
Upgrade Deferral

Reactive Power
Compensation

Contingency Grid Support

Cross Sectoral Storage

Transmission Support

Power Oscillation
Damping

Angular Stability

Services to Support Distribution Infrastructure

Distribution Grid
Upgrade Deferral

Dynamic Local
Voltage Control

Reactive Power
Compensation

Contingency
Grid Support

Intentional Islanding

Cross Sectoral Storage

Ancillary Services

Frequency Containment
Reserve

Frequency Stability of
Weak Grids

Automatic Frequency
Restoration Reserve

Black Start

Manual Frequency
Restoration Reserve

Voltage Support

Replacement Reserve

New Ancillary Services

Load Following

Services Providing Customer Energy Management

End-User Peak Shaving

Continuity of
Energy Supply

Time-of-Use
Energy Cost Management

Limitation of
Upstream Disturbances

Particular Requirements
in Power-Quality

Compensation
of the Reactive Power

Maximising Self-Production/
Consumption of Electricity

Existujúce inštalácie a plánované projekty energy storage



AEN – Dubnica nad Váhom –
*Capacity 120 kWh - installed
power 55 kW*

VSD – Bachledova dolina –
installed power 600 kW -
*Capacity 1200 kWh - plan
12/2021*

G&E Trading / PPA Power DS
– Senec (Gebrüder Weiss
s.r.o.) –
Capacity 432 kWh

Slovenské Elektrárne ES /
Viesmann - Humenné
(Muller Textiles Slovakia)
*FVE 500 kWp and energy
storage capacity 432 kWh*

ZSE Energia – project
ELSEA – región CEE – **in
plan 2023-33**
*Installed power 384 MW a
capacity 420 MWh*

Veolia Energia Levice a.s. –
Levice– **plan**
*Capacity 2,9 MWh, installed
power 5,5 MW*

GreenBat – **plan**
*Capacity 650 kWh, installed
power 650 kW*





Ďakujem za pozornosť

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