### THE IMPACT OF MADEIRA'S BATTERIES ON THE MANAGEMENT OF THE ISLANDS' ELECTRICAL SYSTEMS Electricidade da Madeira Central de Baterias da Vitória CENTRAL DE BATERIAS PORTO SANTO ABH

#CE4EUislands Webinar, 11<sup>th</sup> January 2023 - THE ROLE OF DSOs IN THE ENERGY TRANSITION OF THE ISLANDS - Diogo Vasconcelos (EEM)



**#CE4EUislands WEBINAR** 

THE IMPACT OF MADEIRA'S BATTERIES ON THE MANAGEMENT OF THE ISLANDS' ELECTRICAL SYSTEMS

# BESS Porto Santo (CBPS) | BESS Madeira-Vitória (CBM)

#### Nominal Power: 5,4 MVA / 4,3 MW

Capacity: 3,3 MWh

<u>PA:</u> 06/2020

Eligible Total Cost: 3.576.843,12 €

EU Financial Support: 641.958,64 €

**Co-financed by POSEUR (Cohesion Fund):** 





Source: Hitachi Energy (ex-ABB) | EEM





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Source: SIEMENS SA - Fluence / EEM

<u>Capacity:</u> 16,4 MWh <u>PA:</u> 09/2022 <u>Eligible Total Cost:</u> 9.308.857,27 € EU Financial Support: 7.788.276,32 €

Nominal Power: 23,7 MVA / 15 MW

## BESS Porto Santo | BESS Madeira-Vitória\* – Impact





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### BESS Porto Santo – Impact & Results I



✓ Substantial reduction of frequency variation achieved:

### Speed Droop Control: Frequency Droop = 2 %



 $\checkmark$  Substantial improvement in the quality of service provided to customers:

### "Isochronous speed control emulation"





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### BESS Porto Santo (CBPS) – Virtual Site Visit



#### https://eeminov.eem.pt/cb/videos/Central%20de%20Baterias%20Porto%20Santo\_tour\_FINAL.mp4

**Co-financed by POSEUR (Cohesion Fund):** 









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Movie Credits: Luís Gouveia (EEM)

Future & Opportunities



□ BESS Porto Santo II (6 MW / 12 MWh (EoL)) – Year 2023

&

□ BESS Madeira II – (15 MW / 15 MWh (BoL)) – Year 2024

Both co-financed by Portugal's Recovery and Resilience Plan (RRP):





REGIÃO AUTÓNOMA DA MADEIRA





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Thank You!

Source: EEM

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