

Effects of icing

March 2024



The Big Picture

Centrica Energy is a leading energy trading company operating out of eight offices across all time zones to move energy from source to use. Our mission is to drive the green transition while offering sustainable and predictable energy costs for suppliers and offtakers. In short, we call ourselves energy movers by nature.

16GW

Power Assets

27

Trading Markets

6.6M

Trades

790

Total Headcount
incl. Students

8

Locations

Offices

Denmark
United Kingdom
Belgium
Germany
Sweden
Norway
Singapore

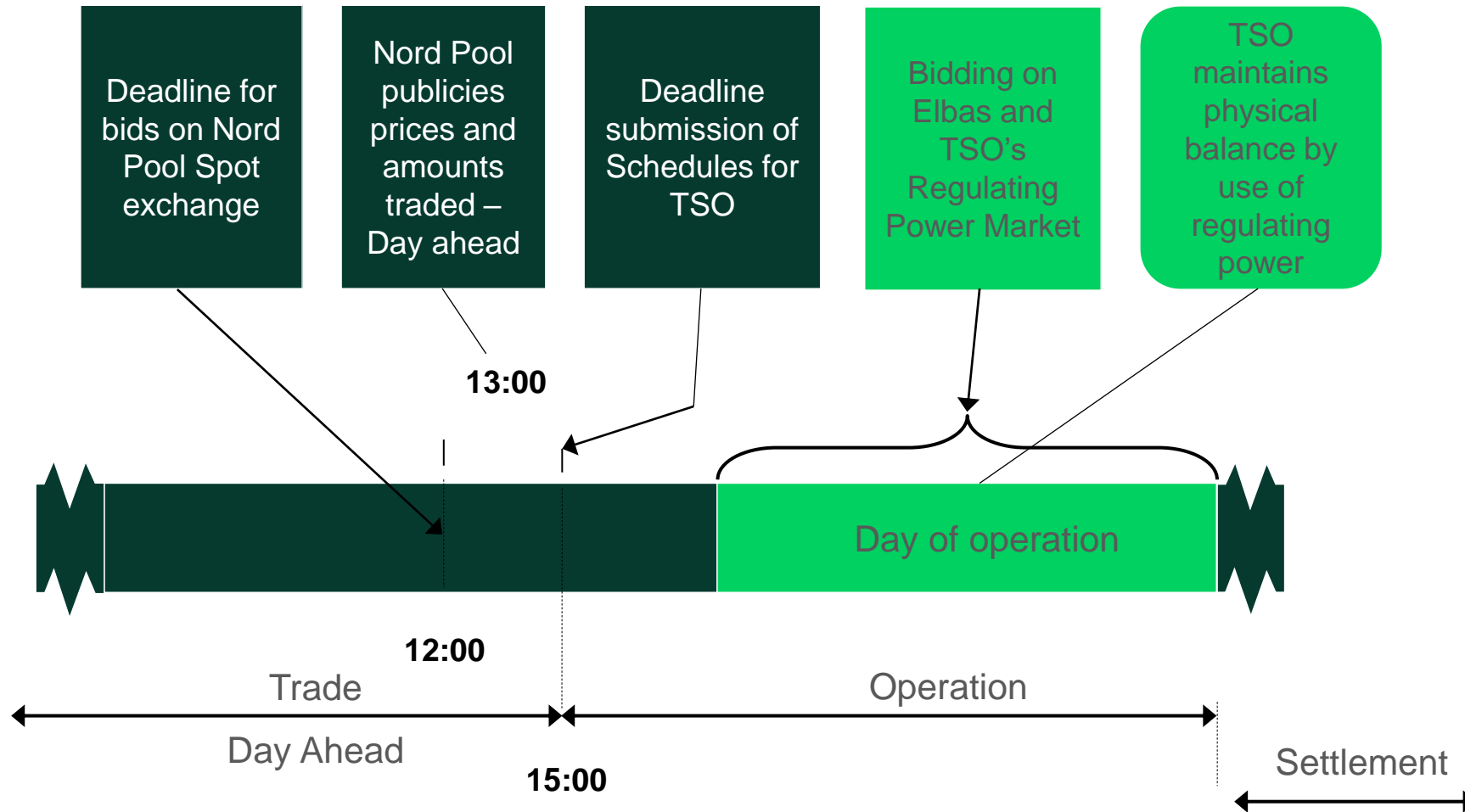
Economic effects of icing

- Higher imbalance cost
- Loss of revenues on spot
- Effects on the hedged volumes

Economic effects of icing

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Timeline in physical power market



Weather Desk

Centrica Weather Desk
24/7 environment

3rd party Suppliers

Weather Models



Wind/PV Power Forecast



Short Term



Trading 24/7

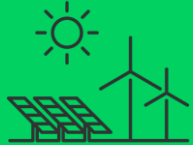
Day ahead Market

Intraday Market

Regulating Power Market



Online Data & Production Data

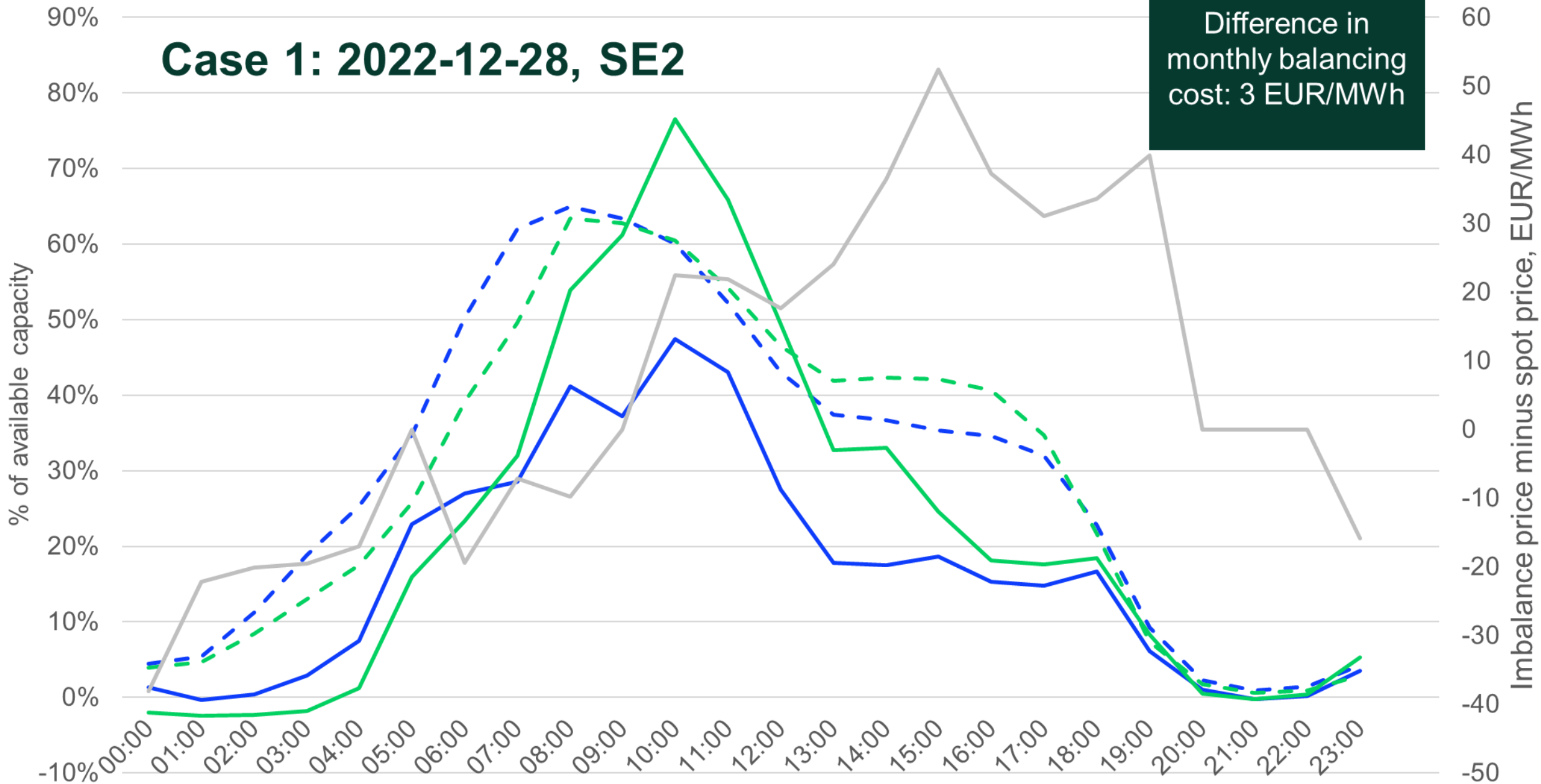


Tech Team

4 engineers –
Communication
Exchange of signals

Case 1: 2022-12-28, SE2

Difference in monthly balancing cost: 3 EUR/MWh

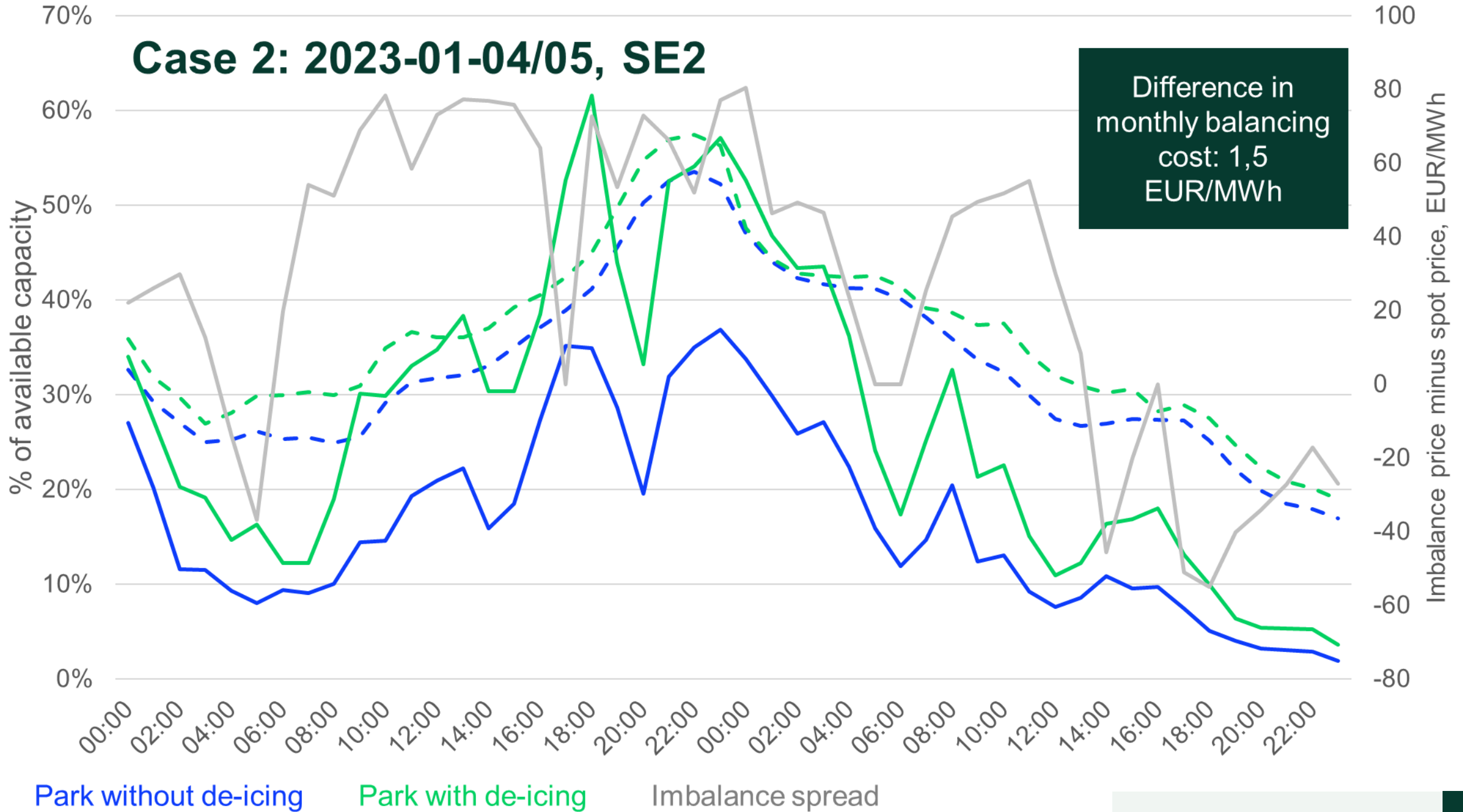


Park without de-icing

Park with de-icing

Imbalance spread

Case 2: 2023-01-04/05, SE2



Difference in monthly balancing cost: 1,5 EUR/MWh

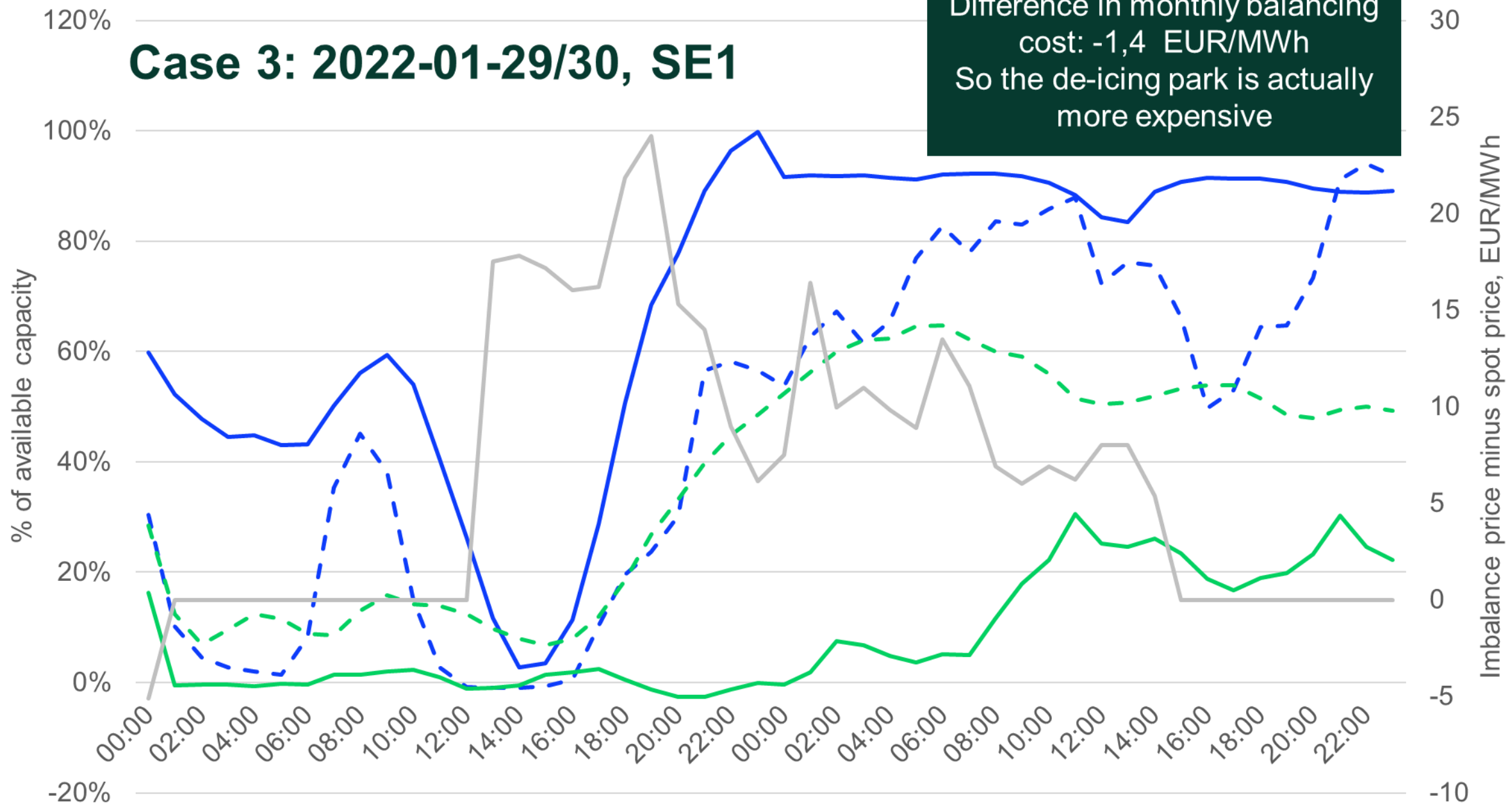
Park without de-icing

Park with de-icing

Imbalance spread

Case 3: 2022-01-29/30, SE1

Difference in monthly balancing cost: -1,4 EUR/MWh
So the de-icing park is actually more expensive



Park without de-icing

Park with de-icing

Imbalance spread

Economic effects of icing

- Higher imbalance cost
- Loss of revenues on spot
- Effects of on the hedged volumes



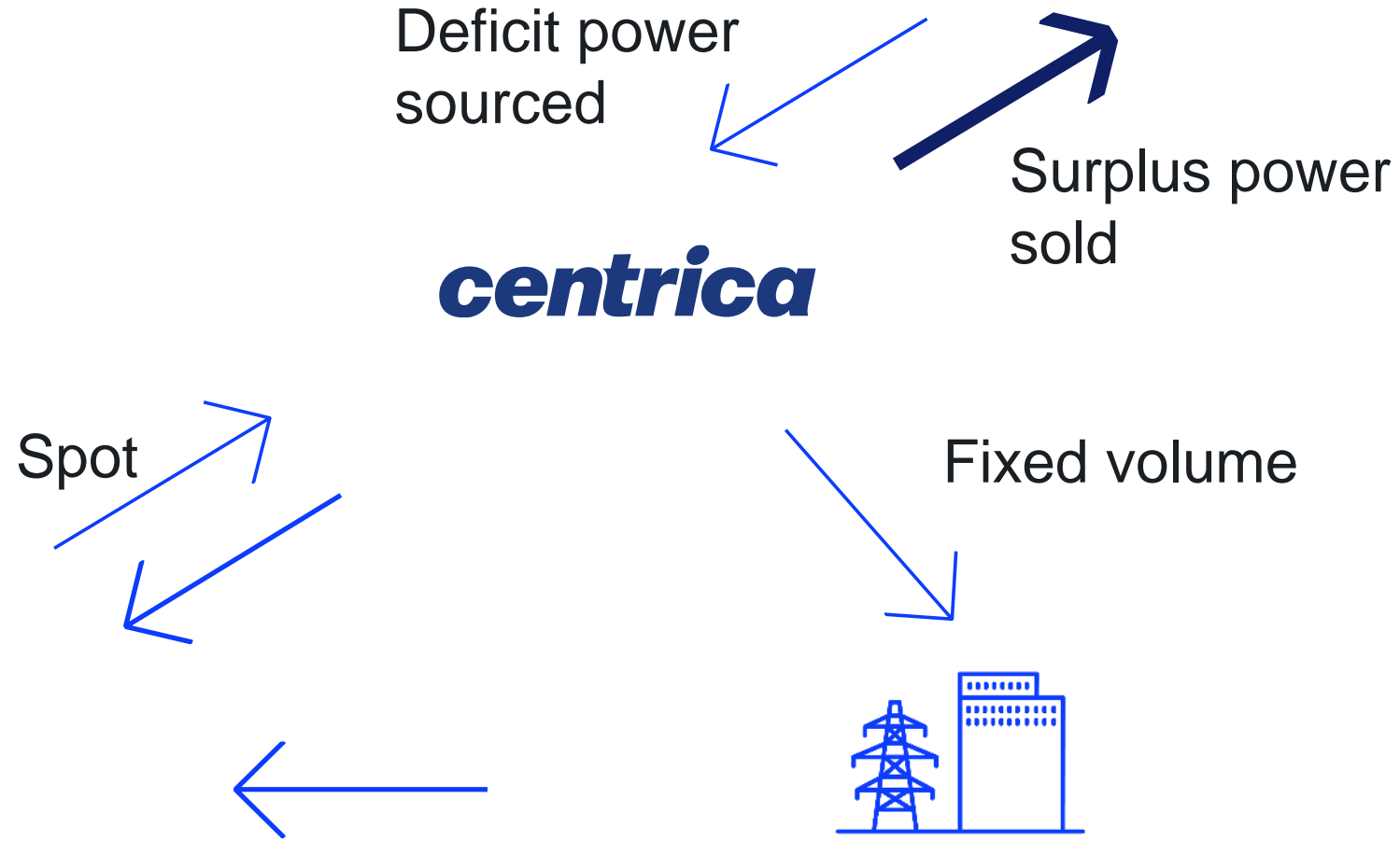
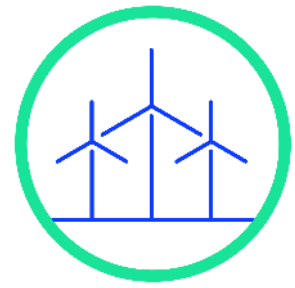
Deficit power
sourced

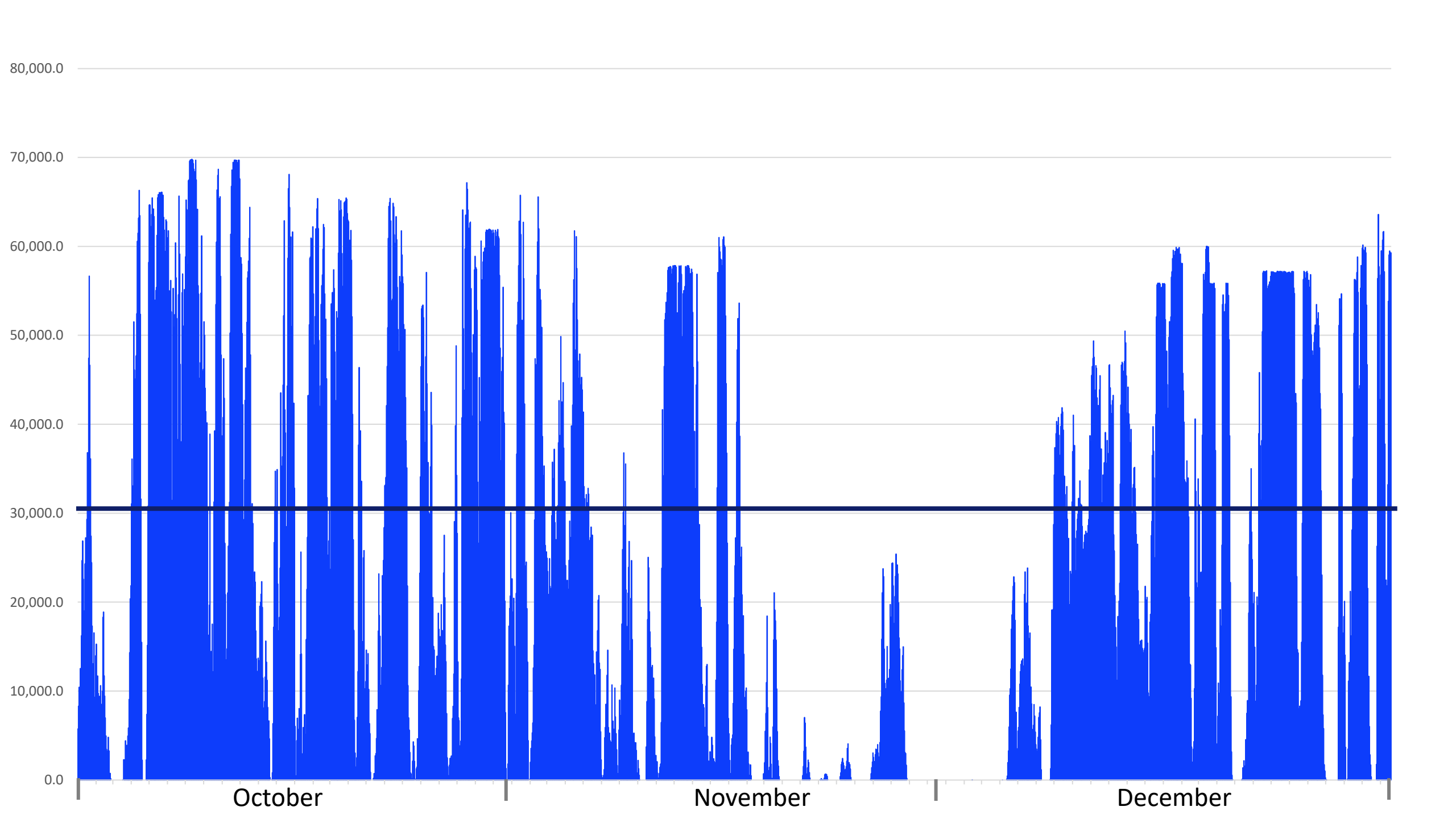
Surplus power
sold

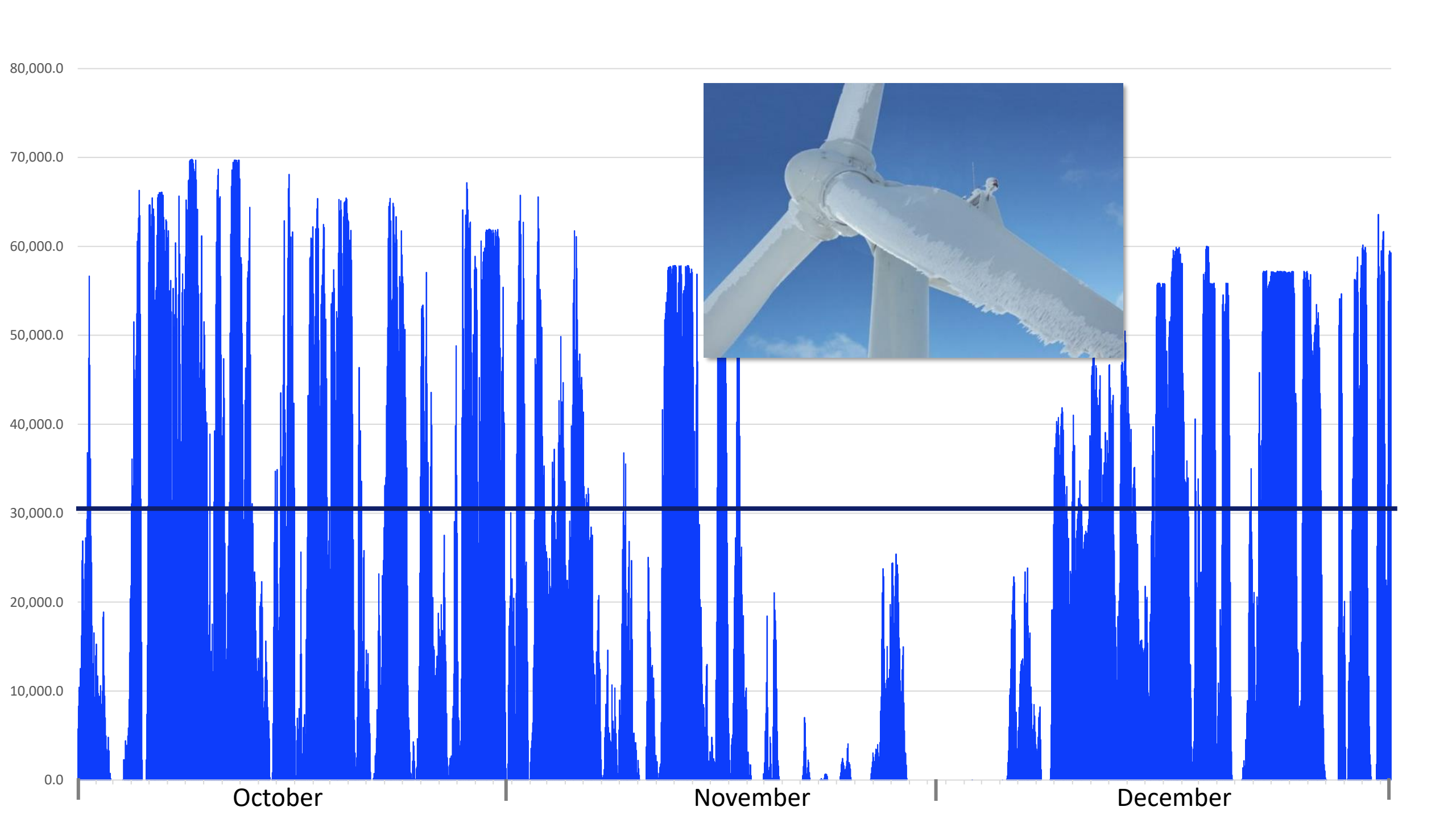
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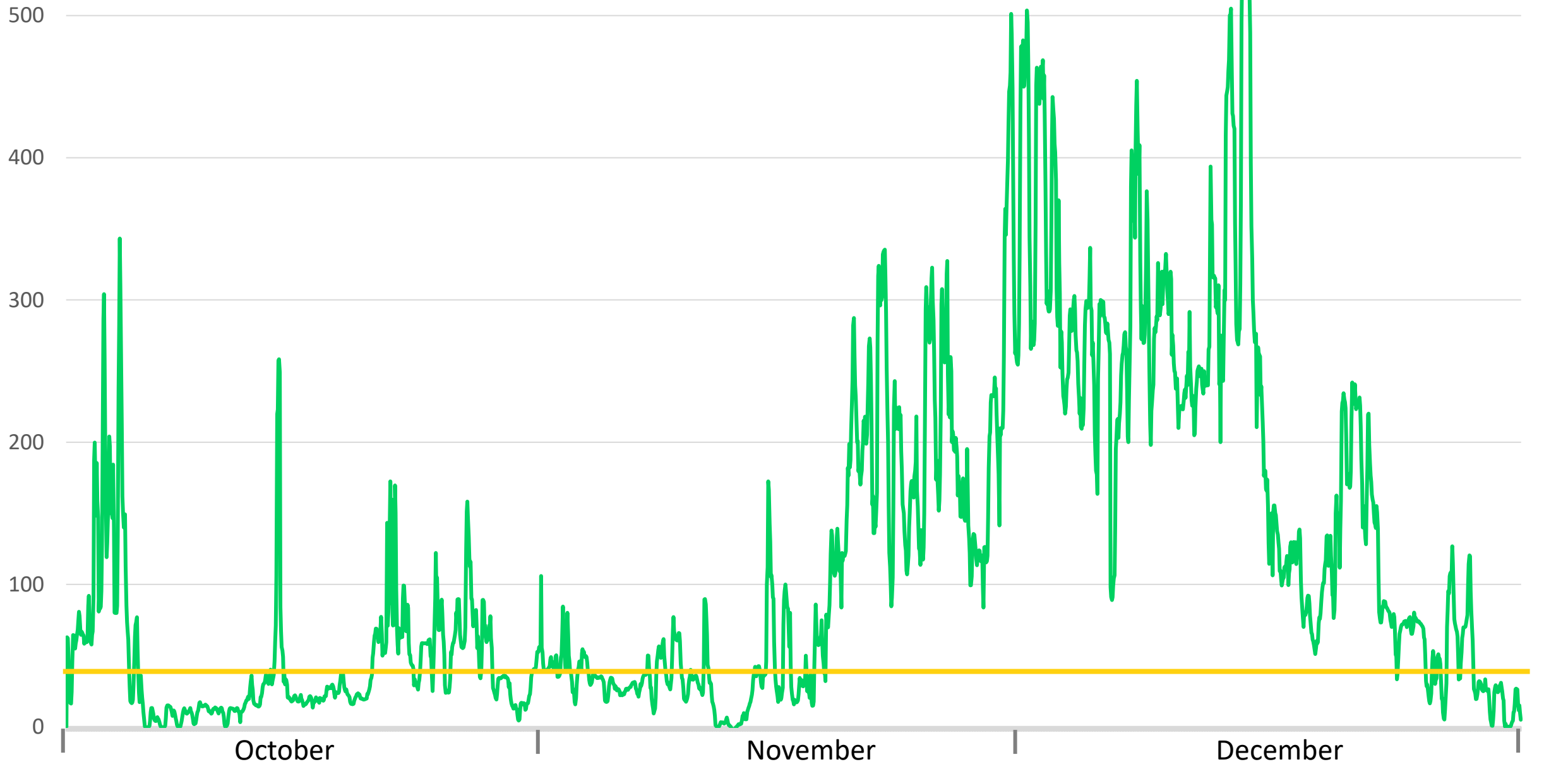
Spot

Fixed volume











500

400

300

200

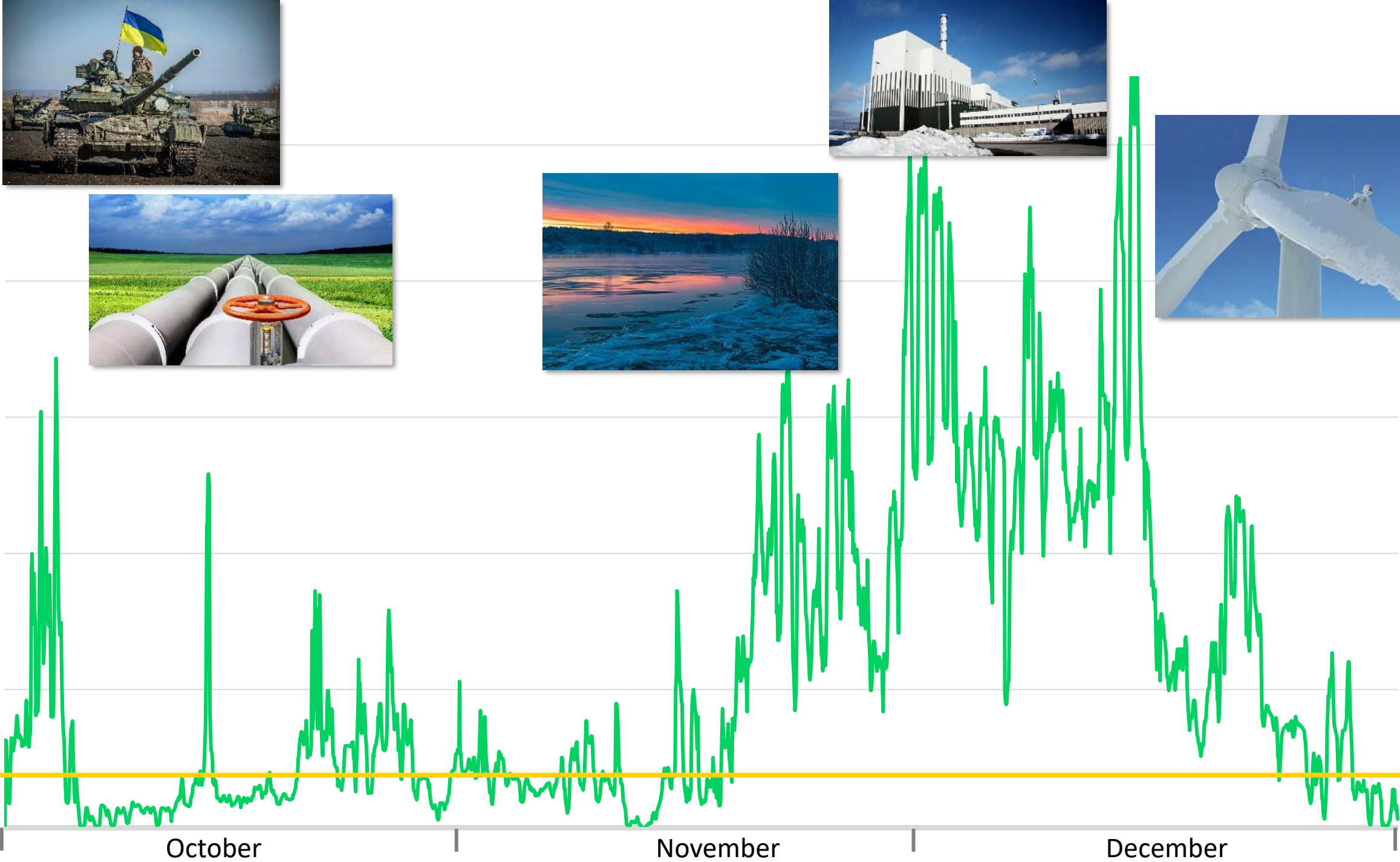
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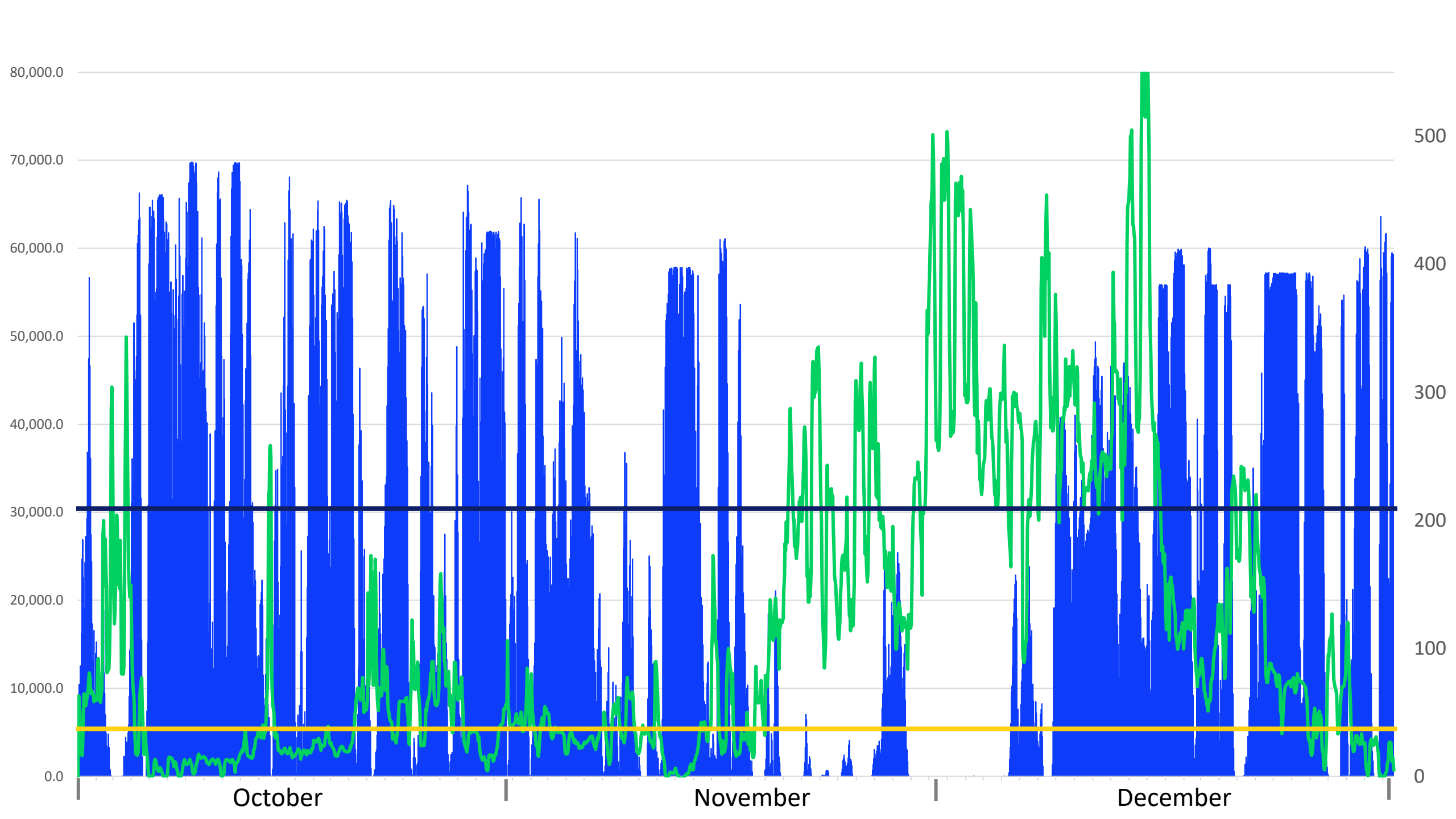
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October

November

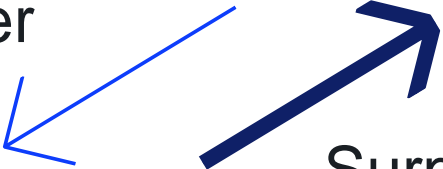
December







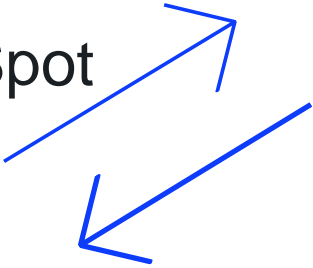
Deficit power
sourced



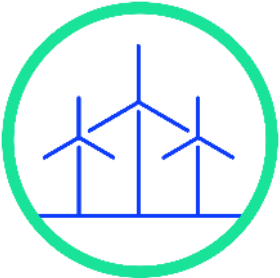
Surplus power
sold

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Spot



Fixed volume



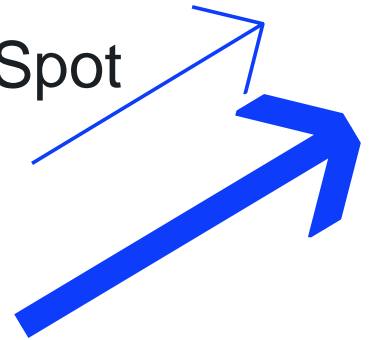


Deficit power
sourced

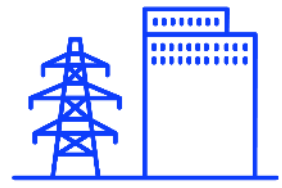
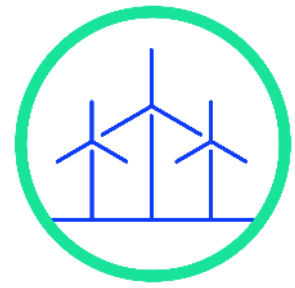


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Spot



Fixed volume



Key points

- Asset balancing costs are composed of "everything"
 - Icing
 - Weather-contingent forecast errors
 - Outages
 - Spreads
- The value de-icing equipment is positive but is difficult to assess due to the other confounding factors
- Is it worth the cost? Hard to tell?
 - Asset specific icing extent
 - Asset specific balancing risk





Energy Movers by Nature



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