BESS — SOLAR ENERGY 2026

How can BESS support the business case for new production and consumption?

Lotta Dahl 19.5.2026

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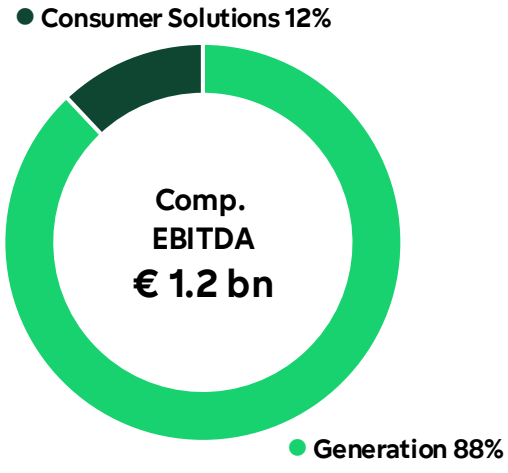
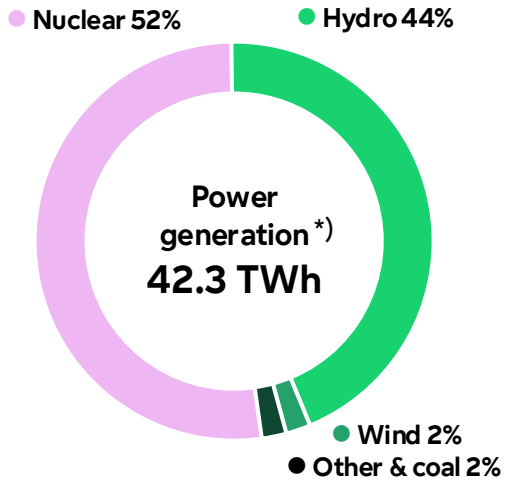
As one of the largest Nordic energy providers, Fortum is well positioned to serve its customers

EARNINGS DOMINATED BY POWER GENERATION

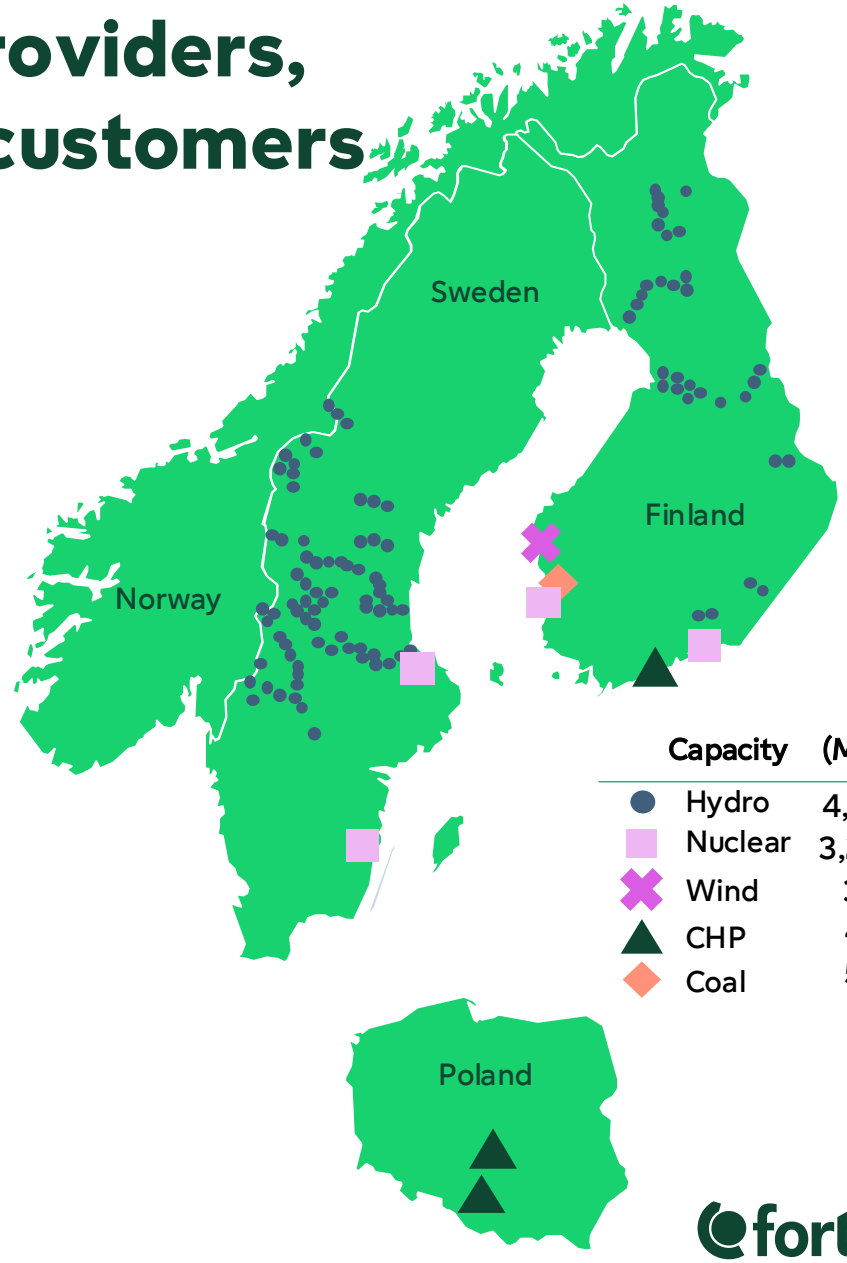


POWER GENERATION,
Specific emissions of 8 gCO_2/kWh



BUSINESS PORTFOLIO

- Hydro
- Nuclear
- Flexibility and optimisation
- Demand-driven renewables
- Heating and Cooling
- Customer business



*) Normalised annual power generation of approximately 47 TWh

Source: Fortum external reporting

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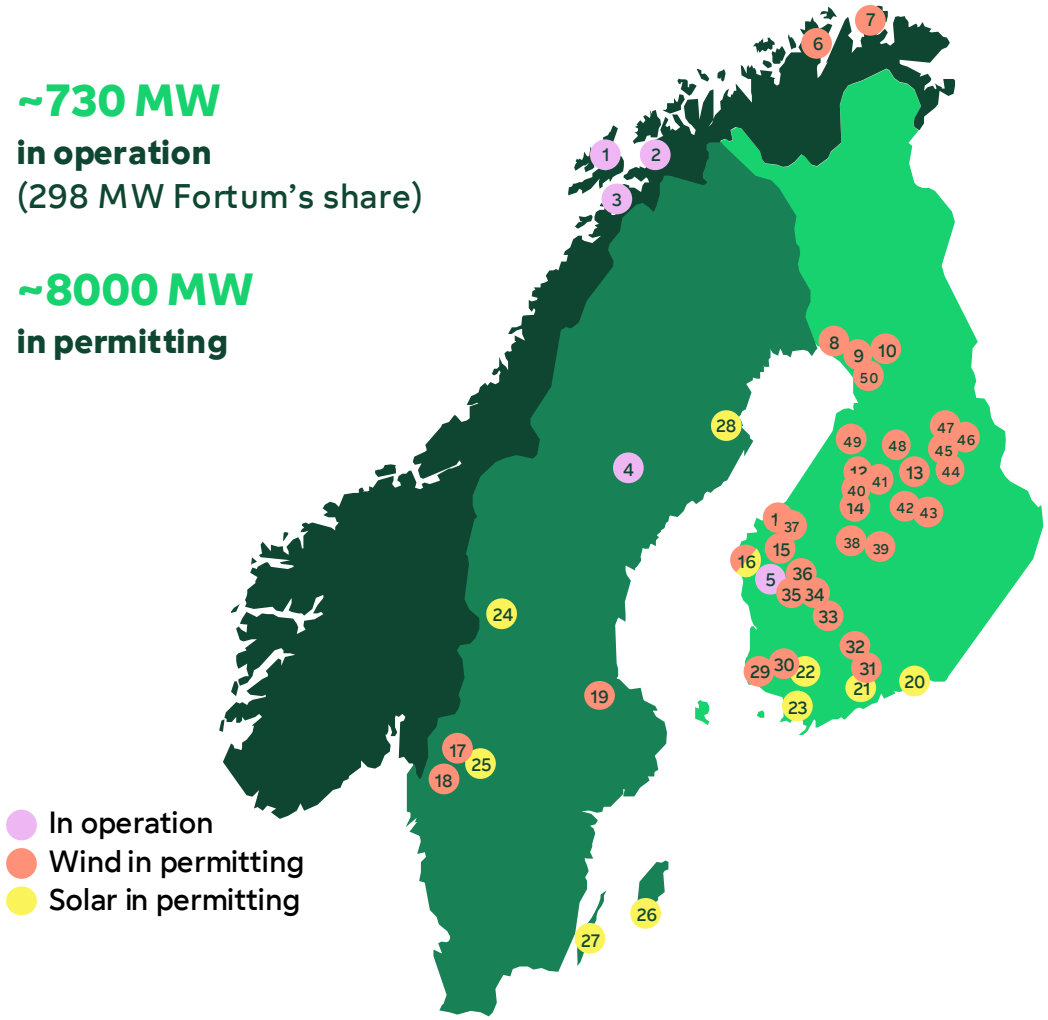
We are one of the biggest developers in the Nordics

~730 MW
in operation
(298 MW Fortum's share)

~8000 MW
in permitting



1. Anstadblaheia (50 MW)
2. Nygardsfjellet (32 MW)
3. Sorfjord (99 MW)
4. Solberg (76 MW)
5. Pjelax (380 MW), Kalax (90 MW)
6. Reinelva & Skarvberget
7. Bjørnviktuva
8. Honkamaa & Kotapalo
9. Lakkasuo
10. Ala-korpivaara
11. Jeppo
12. Sikokangas & Tuulikangas
13. Katajamäki
14. Isoneva
15. Lamminneva
16. Bredåsen, Lautamäki, Kurikka / Pirttimaa, Molpe & Poikel
17. Borgvik
18. Klinthögen
19. Tuna
20. Virolahti
21. Loviisa, Pennala, Ylike & Korvenniitty
22. Marttila & Tarvasjoki
23. Kemiönsaari
24. Trängslet
25. Karlstad Nor, Kalhyttan & Kristinehamn
26. Alvret
27. Isgärde
28. Brännkläppen
29. Kolsa-Juvansuo
30. Maanpäänkulma
31. Kuivanto
32. Tornimäki
33. Murskemäki
34. Myyränkangas
35. Mäntykangas
36. Niittuneva
37. Purmo
38. Tynnörsuo
39. Vuorijärvet
40. Kiiskineva
41. Hautakangas-Harvankangas
42. Vuorimäki
43. Iso-Petäjämäki
44. Sivakkalehto
45. Kivikangas
46. Louhenkangas
47. Isolehto
48. Uljua
49. Matkaniva
50. Iso-Rytisuo

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Electrification requires growth in production and flexibility

FLEXIBILITY SERVICES

WE HELP CUSTOMERS BECOME FLEXIBLE

INDUSTRIAL ELECTRIFICATION

WE BUILD NEW WIND AND SOLAR
WE BUILD NEW FLEXIBLE ASSETS

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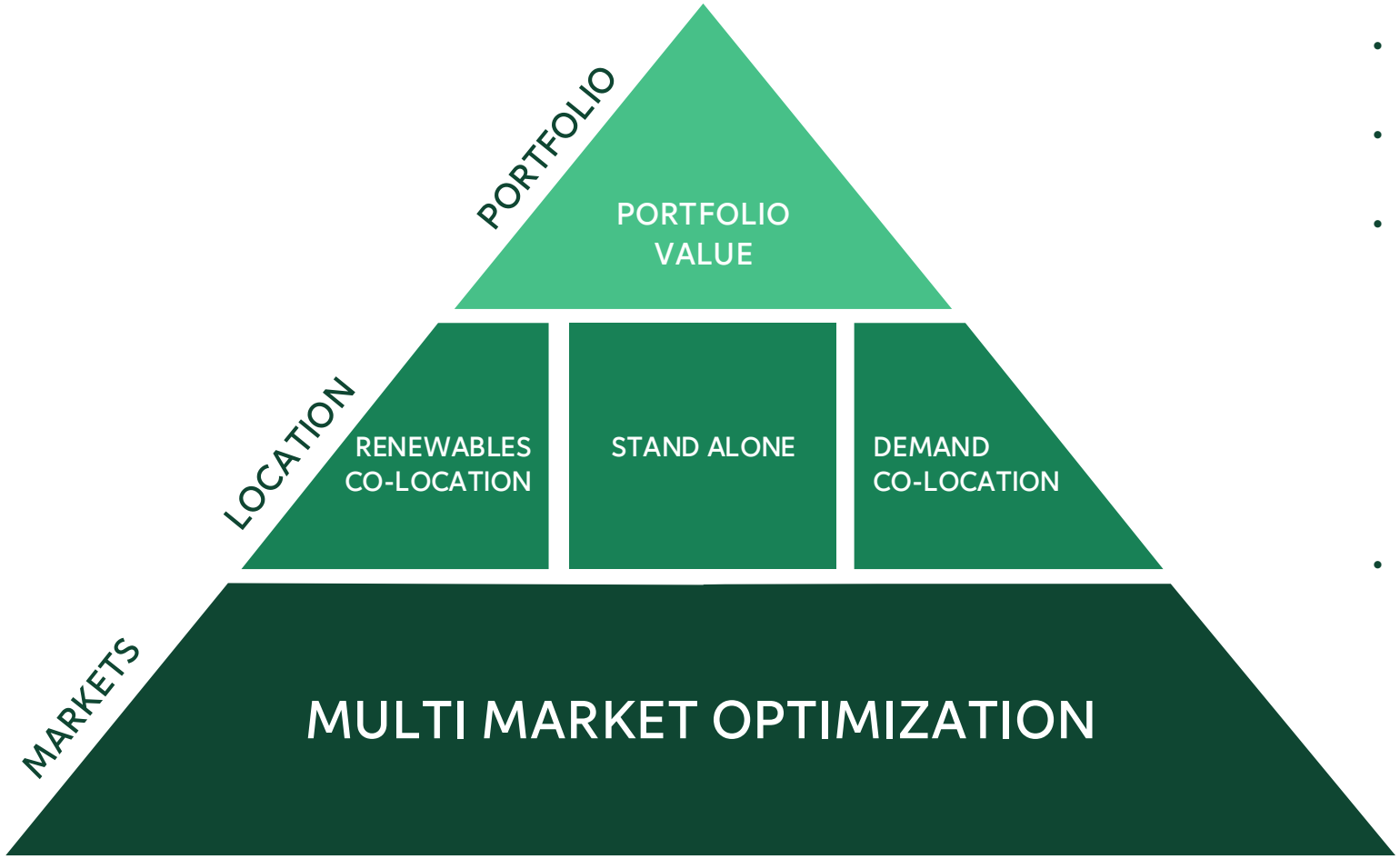
Value stacking is essential for successful BESS project



- Portfolio value: PPA delivery and imbalance management optimization
- Stand alone BESS offers most freedom in optimization and often fastest time-to-market
- Co-location offers savings in initial capex as well as grid costs.
  - Wind/solar co-location should size the BESS so that it fits the PPA/ green certificate offtake
  - Hydro co-location should evaluate BESS as a plant upgrade
  - Demand: BESS can enable faster connection to grid and help with the grid requirements
- Multi Market Optimization:
  - SPOT markets
  - Intraday
  - mFRR , aFRR
  - FCR & other capacity reserves

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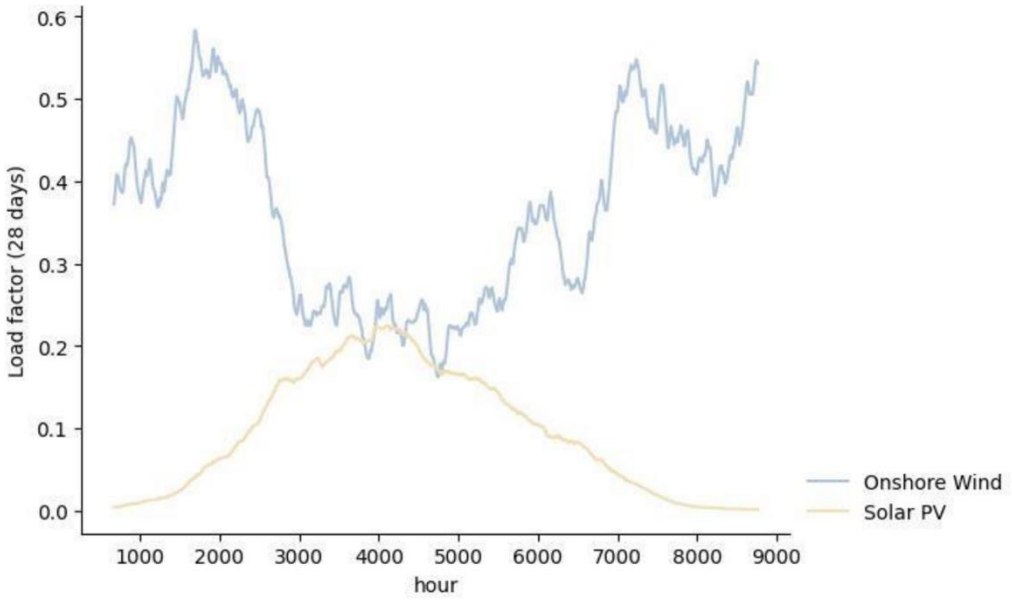
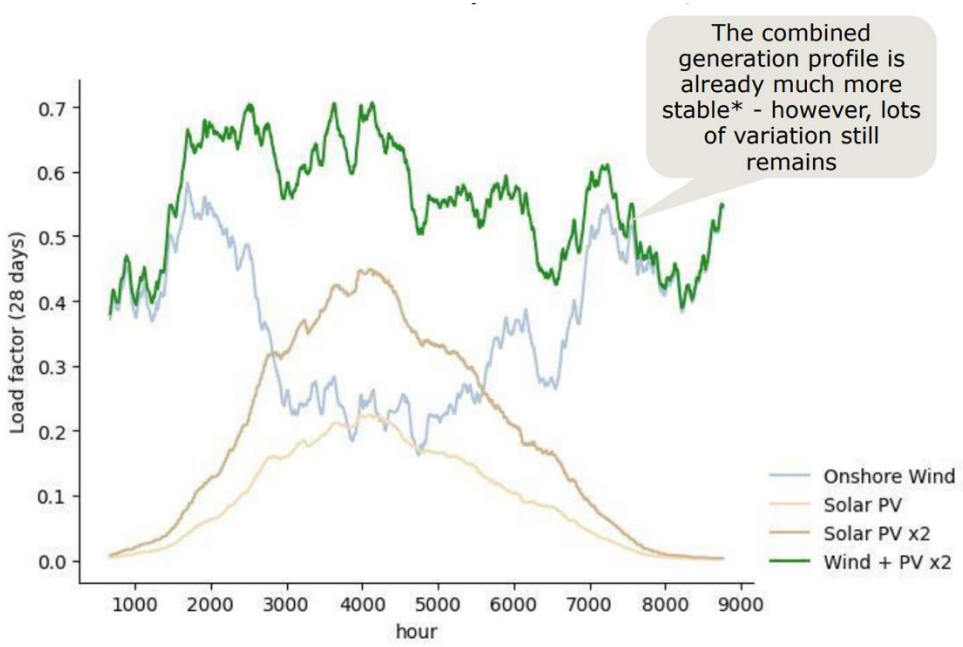
AFRY study 2024:
“Baseloadish PPA with solar & wind & BESS?”





Up to 60% of Energy Coverage Ratio (ECR) can be delivered without BESS – higher ECR’s enabled only by a mix of storage and oversizing.

Asset sizing (MW) for a 100MW PPA				
	60%	70%	80%	90%
Wind (MW_{ac})	141	199	288	431
Solar (MW_p)	177	244	344	477
BESS (4h)	0	14	80	307

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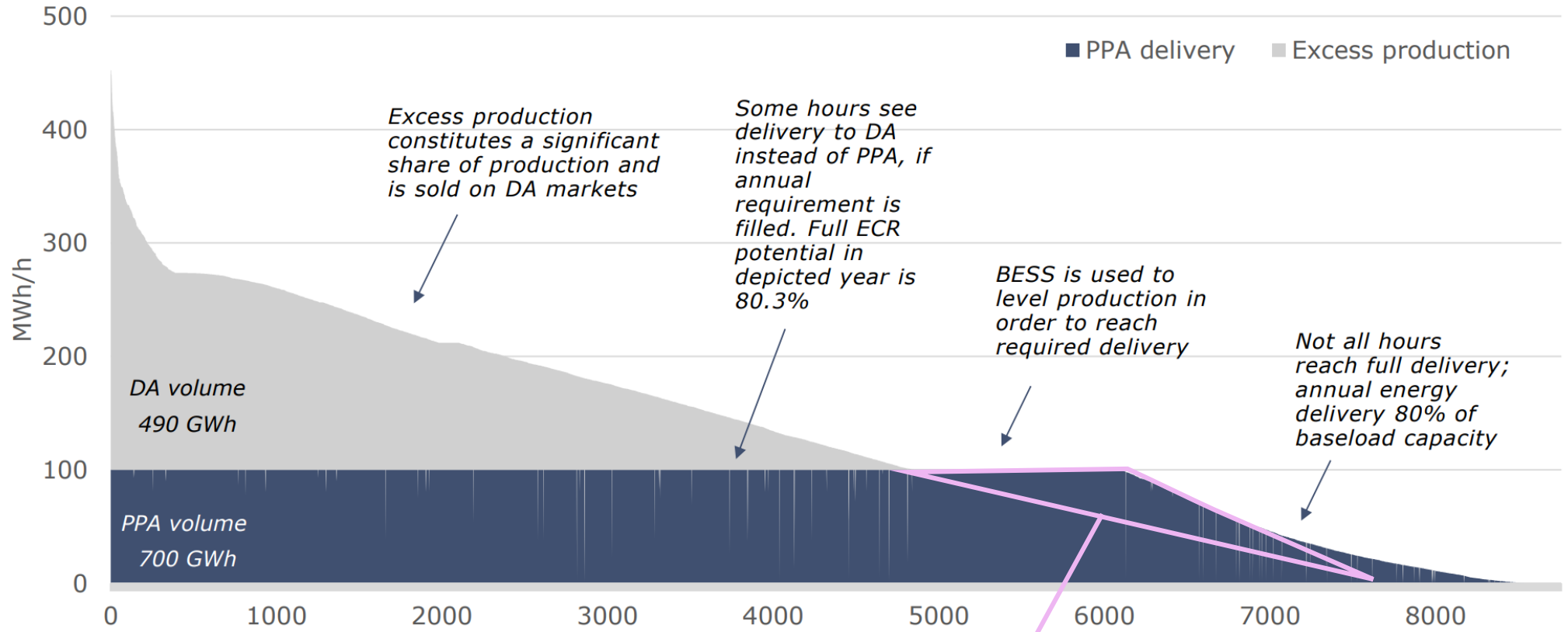
Duration curve highlights dynamics of oversizing and storage

DURATION CURVE OF PRODUCTION IN 2030 AT ECR 80%



BESS volumes face a trade off between PPA value and market income

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Summary

- In previous years, BESS feasibility has been defined by Ancillary Service capacity market prices
- New value stacking strategies are more dependent on location specific advantages and portfolio effects
- BESS has a good profile fit with renewable energy, but earmarking BESS to PPA delivery needs to consider the market-based opportunity cost
- Fortum continues to support electrification and a balanced energy system

THANK YOU!

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