

From Vertikal to SVAL

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Part of Where is The Second Mover?



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Niels Lassen
Skanska

Vertikal Nydalen's natural ventilation lessons now shrink technical systems through SVAL

Øystein Thorup, CEO of Avantor, reported on three years of running Vertikal Nydalen, an office building with no ducts and no traditional ventilation system. Motorised facade hatches open on CO₂, temperature and wind, LowEx heating and cooling draws on 300 m deep wells, and exposed concrete stores heat. Permission took two exemptions, from the building code and the Working Environment Act. In 2025 the office floors had a net surplus of –15 345 kWh, the heat pumps reached a SCOP of 5.04, and users rated the indoor climate 4.05 / 5. Thorup said Avantor paid for the learning and the risk is far lower today. Niels Lassen of Skanska presented SVAL, built on those lessons: over 1000 kr/m² lower investment in technical systems, over 40% less energy use and over 50% lower material emissions from technical systems.

KEY TAKEAWAYS

- Vertikal Nydalen beat its Triple Zero goal, with a net energy surplus on the office floors in 2025.
- Around 4 percent of users were dissatisfied with air quality and 10 percent with temperature, below a reference office.
- Thorup's lessons: architecture and shape were expensive, not the system, and tenants buy rent, not a green label.
- Lassen showed technical trades' costs in office buildings rising faster than building costs since 2010.
- The SVAL approach cut VAV and room controls by about 90%, with no deviations from regulations or standards.

**–15,345
kWh**

net energy surplus on
Vertikal Nydalen's office
floors in 2025