

Rebase Energy Visualisation



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Information Visualization IVIS
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GOAL OF PROJECT

- Provide Rebase energy's clients with an application **visualising combined weather, geospatial and energy data**
- **Aim to help the clients better understand** the predictions of energy output based on weather and geospatial data.

TARGET USERS

- Power traders
- Modity
- Placing bids on Nordpool to sell energy
- Just the right price



LIVE DEMO

DATA - OVERVIEW



Farms
Information



Energy
Production
Forecast



Weather
Forecast



Weather
layers



Energy
price areas

DATA - CLOSER LOOK

Farms Information

Farm ID
Name
Latitude
Longitude
Capacity
Price Area

Energy Production Forecast

Farm ID
Date = Year, Month, Day, Hour
Energy Production
Energy Production after Ice Loss
Wind Direction
Windspeed
Temperature
Relative Humidity

Weather Forecast

Weather layers

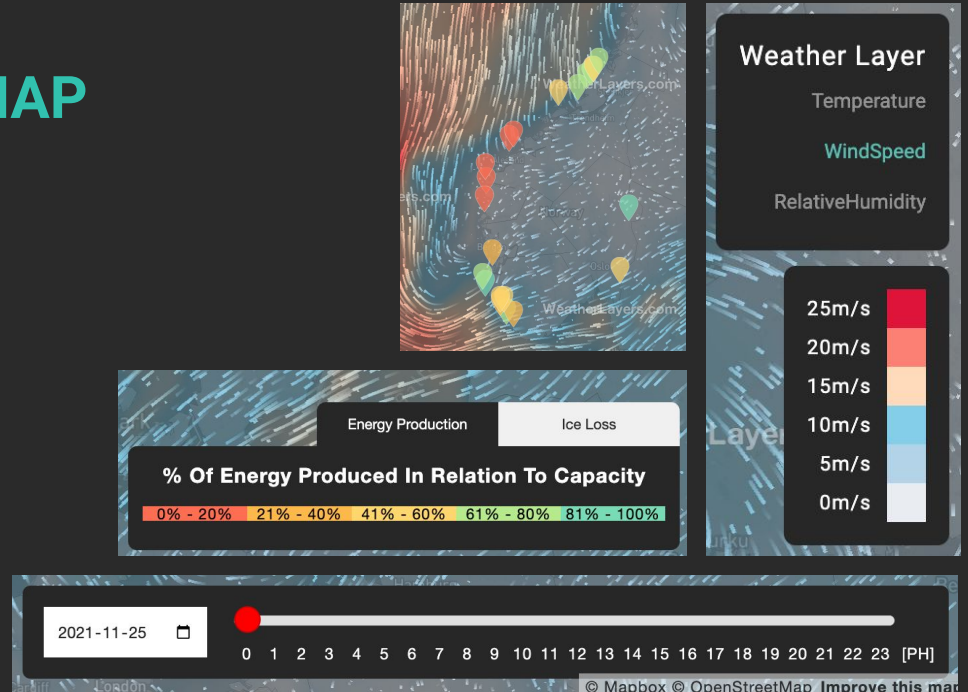
Hour
Humidity
Temperature
Wind

Energy price areas

Zone Name
Country Name
Coordinates

VISUAL REPRESENTATION - MAP

- **Color Coding:** Map markers, weather data
- **Interactivity:** overview, zooming, panning, filtering
- **Consistency** of design

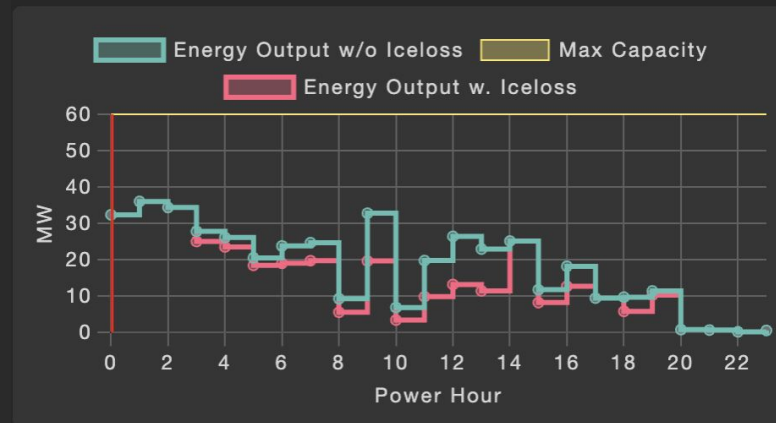


VISUAL REPRESENTATION - GRAPH

- Cartesian coordinates
- X-axis → Power Hour
- Line graphs (with dot markers)
- Colors
- Time indicator

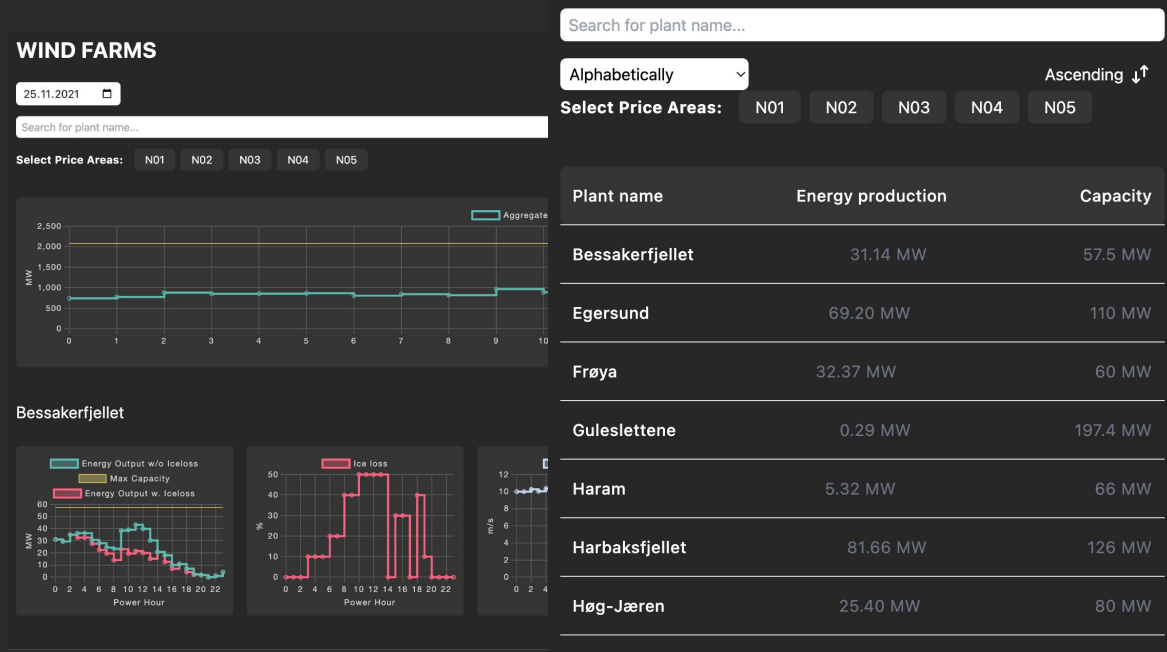
FRØYA

Choose graphs ▾

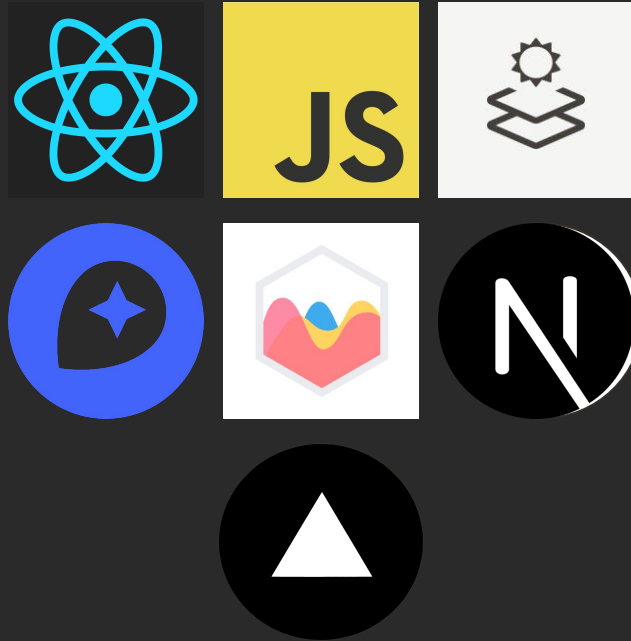


VISUAL REPRESENTATION - LIST

- Filter options
 - On price areas
- Sorting options
 - Alphabetically
 - Energy Production
 - Energy After Ice Loss
 - Capacity
 - North to South
 - West to east



TOOLS



USER TEST

- Think aloud test
- 6 participants

RESULTS

- Unclear drop-down
- Unclear graph legends
- Feature requests

Graph Types ▾

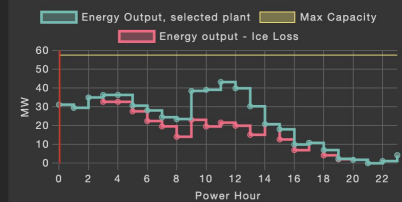
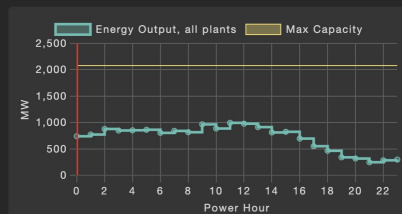
Choose graphs ▾

DETAIL VIEW

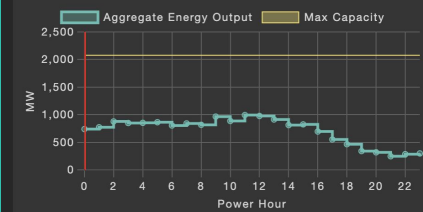
CLOSE

Bessakerfjellet

Graph Types ▾

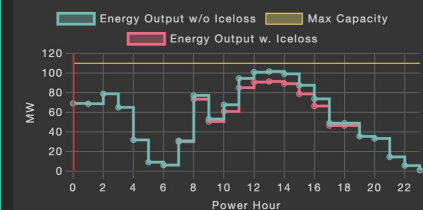


← ALL FARMS



EGERSUND

Choose graphs ▾



LESSONS LEARNED

- It is more difficult than what it looks to transmit a meaningful message.
- Choosing colors is challenging.
- Having specialized knowledge between the team made the process amazing.
- Communication is key, even more so when working with stakeholders.

QUESTIONS?

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