Laminated column cantilever ramp

Tank fragment

1:50

Floorplan

CLT Floor

Glass railing

IPE 200 beam

Robinia wood

Laminated beam (accoya wood treatment)

Building entry fragment

section 1:50

Observatory rooftop

P=80000

Glass portals
Showcasing the level of the stored energy

Tank Base

P=-7000

Observation lobby

Glass portal

Tank fragment

1:50

Ground floor

P=0

Entry building roof

P=5000

Observation lobby

Tank Base

P=66000

P=62500

Detail 1

Laminated column cantilever ramp

1:10

Glas railing

CLT Floor

IPE 200 beam

Robinia wood

Laminated beam (accoya wood treatment)
Battery Amsterdam
A hydro energy storage facility in the heart of Amsterdam

Where mankind interacts with clean energy

Highest observation deck in Amsterdam, incorporating 440 m² of event space

Kattenburg housing
Water tank
Able to power all housing on Kattenburg

BA Springs
A place for shopping and leisure, 700m² of commercial space

Observation Deck & Restaurant

2440 m² of solar panels on wooden outercore structure

P=62500+
P=80000+
P=96800+
P=-14000

Hydro facilities & technical rooms.
District heating and cooling production systems
Battery Amsterdam
The highest timber structure in The Netherlands

- Laminated beams connected with a screw thread
- Laminated beam anchor joint
- Laminated beam costumized joints by a weave system
- Wooden outercore Structure
- Wooden innercore Structure
Battery Amsterdam
A beacon of sustainability on Marineterrein

Performance

- Producing 4 times the energy it consumes
- District renewable battery
- Acting as Kattenburg’s district campus building
- Producing 756,320 Kwh yearly from solar panels
- Renewable battery capable of powering Kattenburg and other districts.
- District cooling and heating using Thermal energy from surface water.

Battery Amsterdam
Where mankind interacts with clean energy

BA Springs
Where people can come to visit and shop while simultaneously being within a power plant. Making energy tangible for citizens becoming aware of where our energy comes from.

Marineterrein
The first step in to a new future for marine terrains. Creating a new sustainable future for Marineterrein, and propelling Amsterdam towards their goal of a sustainable city.
The future of Power Plants
How will secure, clean and efficient energy be perceived within our future society?

The past

Either renewable or conventional power plants, they are mostly seen as private buildings without connection to the outside world.

The future

With new renewable technologies, each production system has become its own distributed generator, contributing on its own to the net. This means, that the perception of power plants will change in the future, as each building can become a producer in contrary to a consumer of energy.

Perception

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The Big picture

We need to look at buildings as opportunities to generate energy, not only fulfilling its own needs but also an opportunity to produce energy for the community. These opportunities arise from a different state of mind and not from a singularly state of mind.

Research continuation

To design a greener future, we need to look upon nature for energy production, finding green solutions for our energy crisis. Creating a system that fits within our city and society.

Asking the question:

How can we ecologically produce electricity?

With innovations and smarter technologies, we can reinterpret the ways we see and use renewable energy production appliances within the built environment. By using more ecological appliances, we can rethink these systems in a way that it would be to a state that people could live and interact. Hence, changing the way we look upon power plants.

A new way of thinking

With innovations and smarter technologies, we can reinterpret the ways we see and use renewable energy production appliances within the built environment. By using more ecological appliances, we can rethink these systems in a way that it would be to a state that people could live and interact. Hence, changing the way we look upon power plants.

Battery Amsterdam

Where mankind interacts with clean energy

EU societal challenge

Energy drives the modern economy, but even just maintaining our standard of living requires a huge amount of energy. As the world’s technological economy, Europe is even-dependent on the rest of the globe for its energy – energy derived from fossil fuels that accelerates climate change.

The EU has, therefore, set itself ambitious climate and energy targets. EU funding through Horizon 2020 will play a key role in achieving these goals.

Can Marine terrain be transformed into a new type of power plant, where people can live and interact with one another, without realizing that there within it a power plant? Integrating future sustainable technologies or seamlessly without harming the marine terrain area.