



Energy transition in Norway

Ready for Nuclear Power?

7th of December 2023
Pifa

Åsmund Bråtekas
The municipality of Halden, Norway



Energy has never been an issue for norwegian municipalities

Large quantities of cheap hydropower has just been there, securing growth, together with oil and gas



150 TWh

88% hydropower

Norway is heading towards lack of electricity

Oslo region lack 16-18 TWh
Can we live with that ?

A large, dense parking lot filled with hundreds of cars, mostly sedans and hatchbacks, parked in neat rows. The cars are of various colors, including white, silver, black, and blue. In the background, there are residential buildings and trees under a clear sky. Overlaid on the center of the image is the text "Go somewhere else!" in a bold, red, sans-serif font.

Go somewhere else!

Governmental documents «The energy commision»:

Norway need to produce 40 TWh more in 2030
according to the goals in the Paris agreement



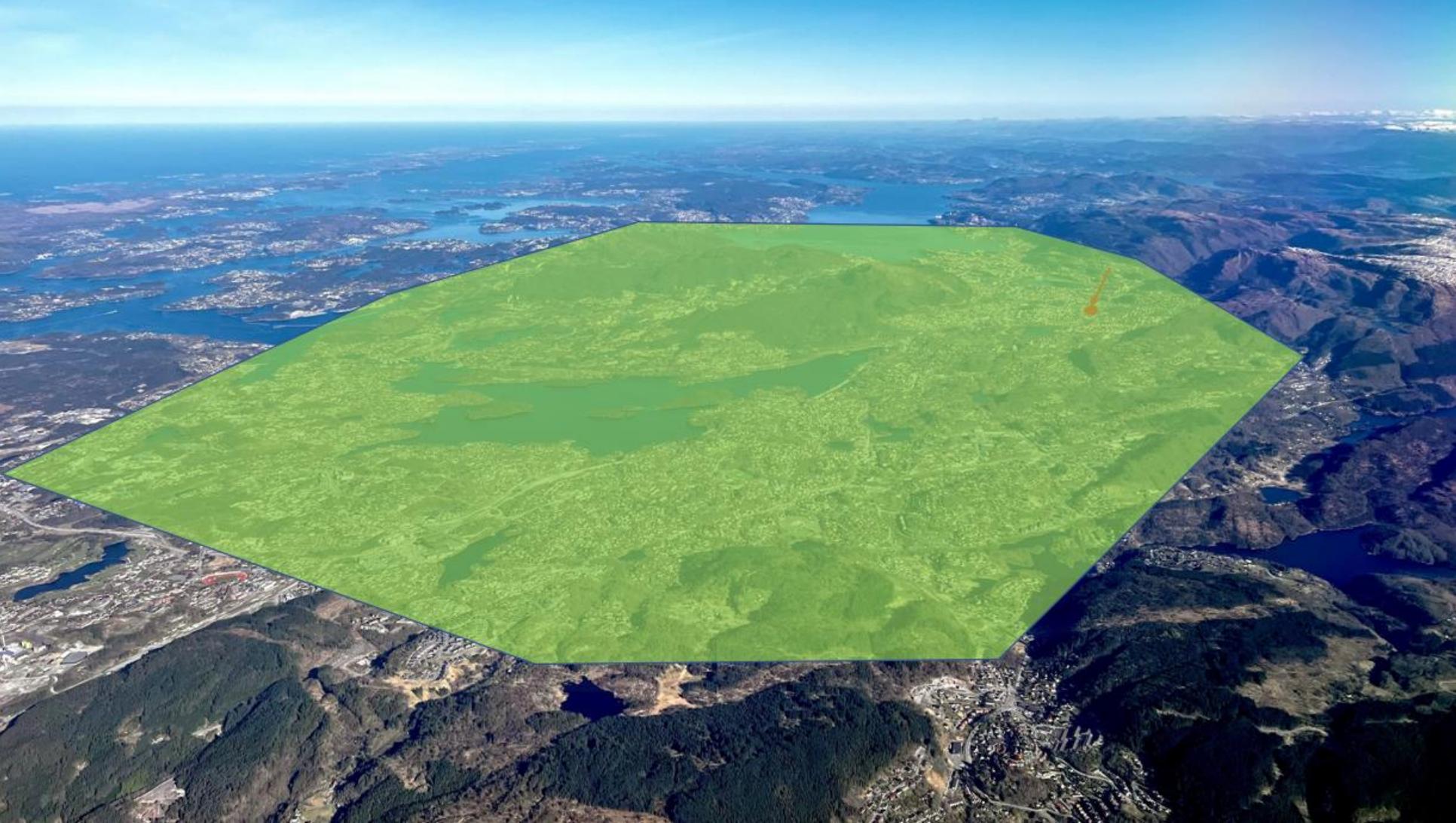
**Norwegian authorities:
Need to produce 150 TWh more in 2050
Norway have to double the production of
power to achieve the goals in the Paris-
agreement**

(Hydropower can only be made more efficient by 3%)

150 TWh more, how?

Government answer:
Wind and solar

Municipality of Halden says:
We have to consider nuclear in the energymix
and we need facts to decide what sources to include in the
mix, facts such as the footprint...





The Kunming-Montreal Global Diversity Agreement (COP15)

United Nations Biodiversity Conference

COP15 / CP-MOP10 / NP-MOP4

Montreal, Canada, 7-19 December 2022

The UN Nature Agreement - Restore 30% of damaged nature



Important to document if Norway towards 2050 can:

- Make **future jobs and secure the framework conditions for businesses**, and at the same time
- Comply with the **obligations under the Paris-agreement**, with
- **Doubling the production of electric power**, and simultaneously
- Manage to **achieve the goals under the Kunming-Montreal**

...without taking advantage of the Nuclear workhorse



We will need nuclear power

Municipality of Halden consider Small modular reactors (SMRs) to play an important role in the future energy-mix in Norway and in Halden; for the production of low carbon electricity

- That's the reason why: we have established the company **Halden Nuclear Power AS** together with a Hydropower company (Østfold Energy) and Norwegian Nuclear Power AS, - to give power to the local industry
- That's the reason why: Some municipalities, together with us, have established **Norwegian Nuclear Municipalities**

....to change governmental politics bottom – up

Nuclear in Poland

- We are impressed by the willingness to secure the energy needs in Poland
- We monitors your progress closely
- We will like to collaborate and learn with Poland about nuclear topics
- **We can contribute with world leading researchers**, eg nuclear safety (IFE, Institute for Energy Technology)

Every municipality should appraise to be a part of this. It is a big opportunity for growth!



Dziękuję państwu za uwagę