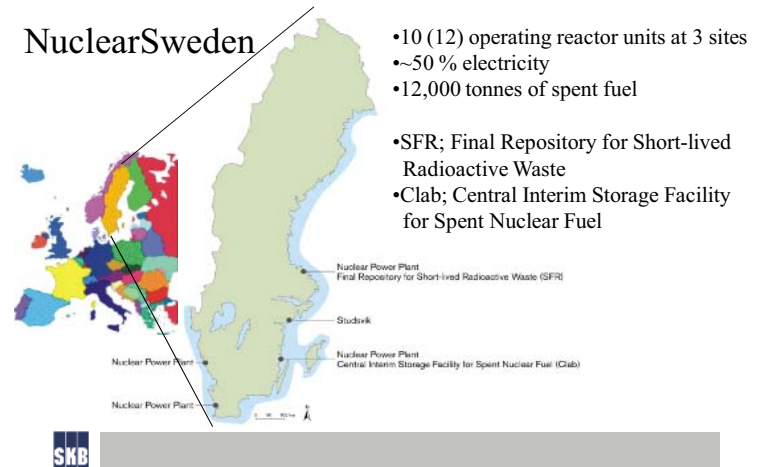


Siting and public communication in the Swedish deep disposal programme

Claes Thegerström
Svensk Kärnbränslehantering AB
Swedish Nuclear Fuel and Waste Management Company

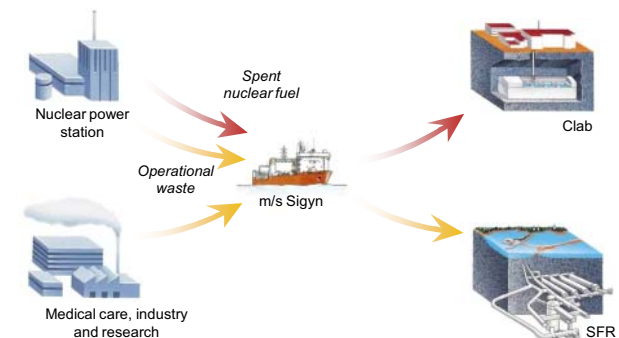


Svensk Kärnbränslehantering AB Swedish Nuclear Fuel and Waste Management Company

- Owned by the utilities
- Responsible for
 - Research
 - Technical development
 - Siting
 - Construction
 - Communication



SKB's system in operation



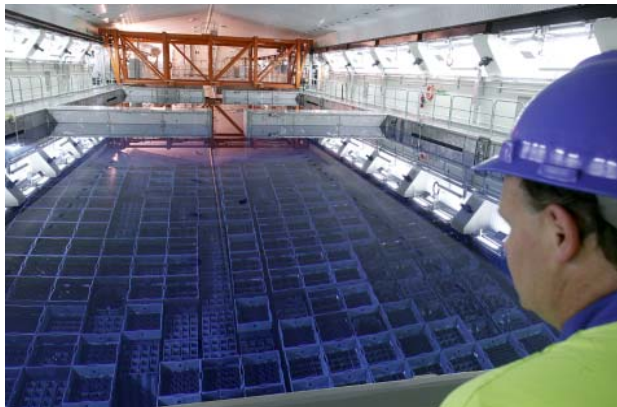
Clab –
Central
Interim
Storage
Facility
for Spent
Nuclear
Fuel



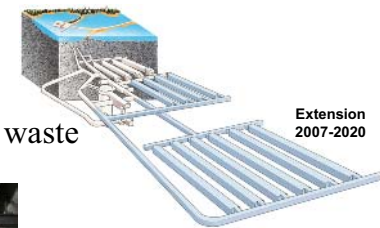
Clab



Clab



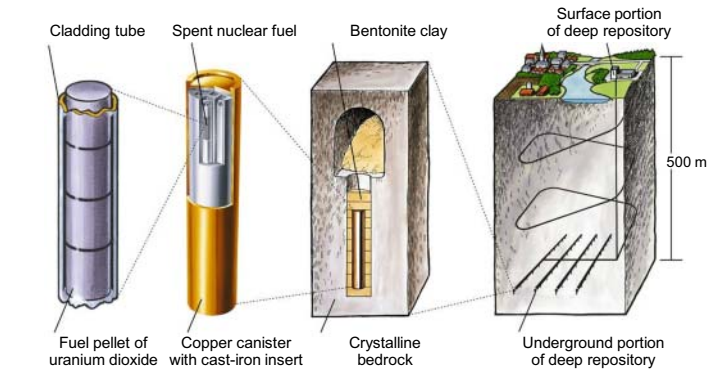
SFR
Final repository for
short-lived radioactive waste



SFR



KBS - Safety barriers



Future facilities

Canister factory and canisters



Encapsulation plant



Final repository



The Encapsulation Laboratory



The Encapsulation Laboratory



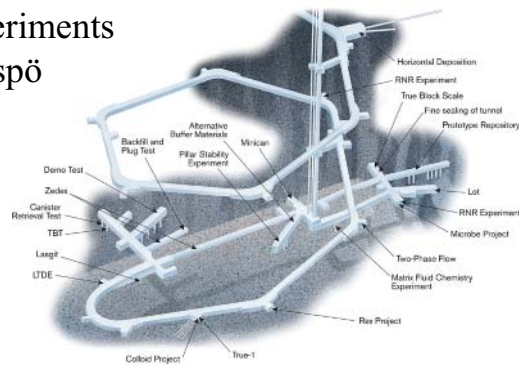
SKB

Äspö Hard Rock Laboratory



SKB

Experiments at Äspö



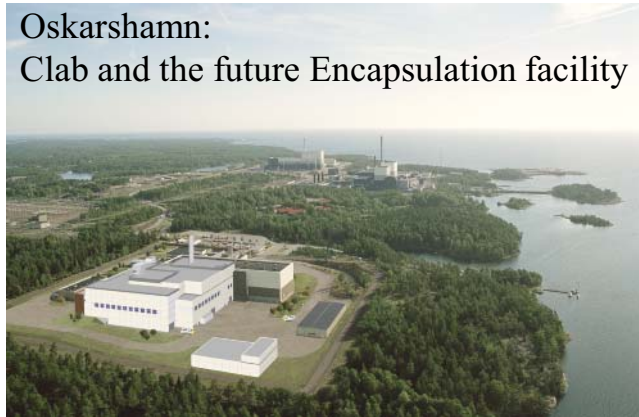
SKB

Äspö Hard Rock Laboratory



SKB

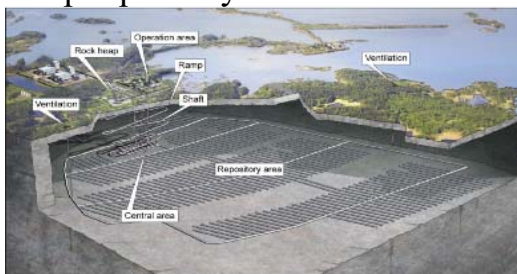
Oskarshamn:
Clab and the future Encapsulation facility



SKB has selected Forsmark



Östhammar:
Deep repository at Forsmark



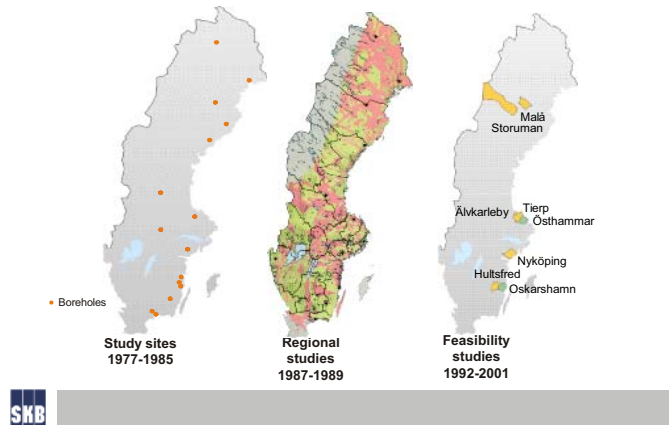
- Dry bedrock
- Less space
- Close to existing industrial area



Siting



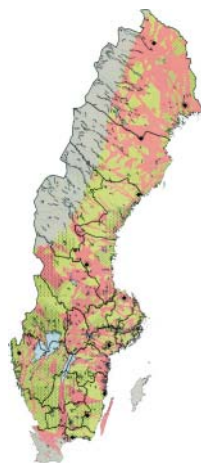
Studies 1977–2001



Protests against drilling was common at the study sites



SKB



Suitability of bedrock for a repository of spent nuclear fuel

- Probably suitable bedrock
- Probably unsuitable bedrock

SKB:s conclusion:

A suitable bedrock for a repository could probably be found in most parts of Sweden providing the search area is large enough.

Without a local acceptance it is not possible to establish a repository.

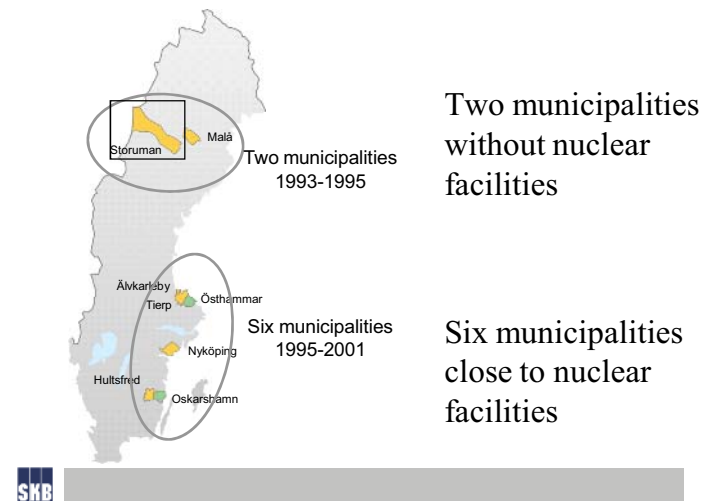
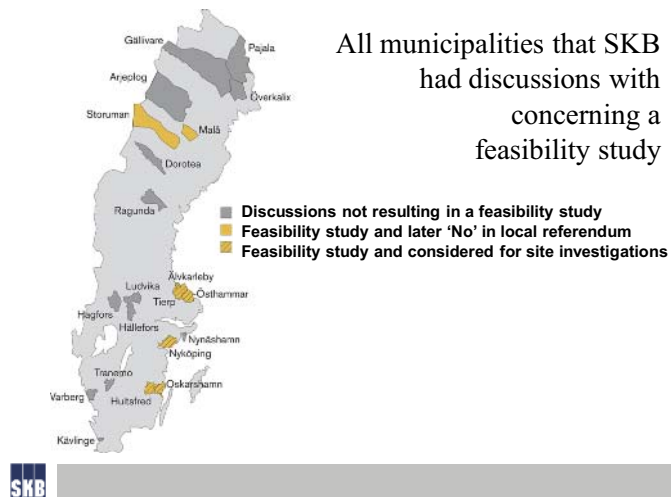
SKB



Feasibility studies of voluntary municipalities during 1993–2001

★ Nuclear facilities

SKB



Feasibility study comprised

- Geological overview
- Identification of potentially suitable areas
- Studies of transportation
- Socio-economic studies
- Interaction with stakeholders
- Communication
- Local office with SKB-staff



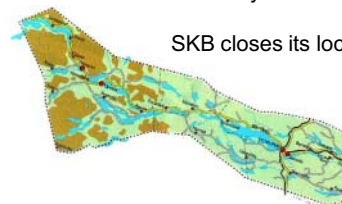
Storuman municipality holds referendum 1995

"Shall we allow SKB to continue their siting work in Storuman?"

71% says No

28% says Yes

SKB closes its local office and leaves Storuman



Why was SKB unable to achieve acceptance for a repository in the Storuman municipality

- Storuman was the first feasibility study. Both SKB and municipality officers were **inexperienced** in extensive public communication.
- The reason for the municipality officers to invite SKB was the prospect of an increased standard of living, but they **failed to get local support**.
- Selecting a remote municipality was perceived as a signal that the repository was so dangerous that it had to be located far away from populated centers.
- The "self-image" of Storuman was a wilderness area with vast forests, high mountains and clean waters. **A repository did not fit the picture.**
- The **tourist industry** was locally seen as the hope for the future. They regarded a repository as a major threat and campaigned strongly against it.



Feasibility study of Östhammar 1995-2001



Candidate area at Forsmark



Daily contact with and monthly newsletter to nearby residents



Uppsala Nya Tidning



Kärnkraftsdebatt vid köksbordet

SKB

Small information meetings at peoples homes

"Debate on nuclear power at the kitchen table"

Information to nearby residents 1995-2008

About 250 households within 10 km from the site



SKB

Information meetings with nearby residents



SKB

"Hundred neighbours came to the SKB information meeting – few are worried" UNT 2007-09-09



Groups with low previous knowledge of nuclear waste are prioritized



SKB

Health care personnel

So far we have met 90% of all health care personnel in the Östhammar municipality



A two-day bus tour to SKB facilities at Oskarshamn is offered to all people in the Östhammar municipality

In total, more than 2,800 persons (18% of total population above 18 years) have made this tour

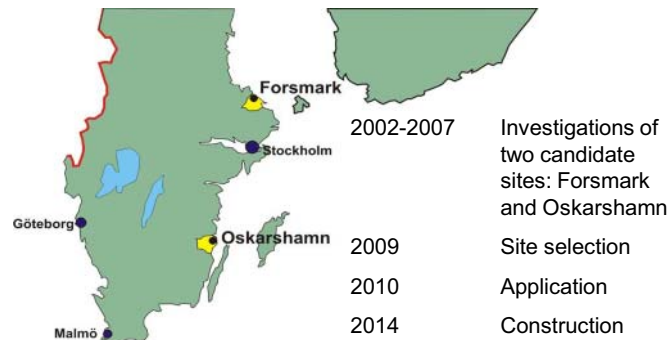


Why has SKB so far been successful in achieving acceptance in the Östhammar municipality

- The **positive experience** from the establishment of the Forsmark nuclear power plant also provides an interest for locating a repository of spent nuclear fuel in the municipality.
- Östhammar was the third feasibility study. SKB had **previous experience** with extensive public communication.
- In Östhammar it is credible to argue that a repository will increase the standard of living, and will **not threaten the tourism industry** nor real estate values.
- **Ten years of information** has provided the time needed to have discussions in small and informal meetings with several thousand local people.
- **SKB communication officers have not changed.** They have over the years built an informal network and are well respected.



Investigations and selection of a site for a repository for spent nuclear fuel in Sweden



Östhammar and Oskarshamn municipalities work in partnership regarding the siting of the repository



- Safety is the main siting criteria
- Two winners
- Request for added values for their participation in solving a national problem

Municipal commissioners Jacob Spangenberg, Östhammar (left) and Peter Wretlund, Oskarshamn (right).



Added value

October 2007	Joint letter from Östhammar's and Oskarshamn's municipalities (ÖS/OS) to SKB
April 2008	Cooperation agreement ÖS/OS
November 2008	Declaration of intent SKB and SKB's owners
March 2009	Framework agreement SKB/SKB's owners and ÖS/OS
June 2009	Site selection
Initiation of added values projects Realization of projects	



Added value

Background

Considerations

"Win/win"-principle

Intentions

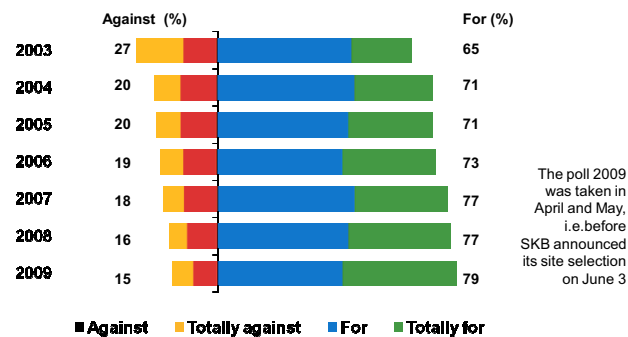


Areas of Added value

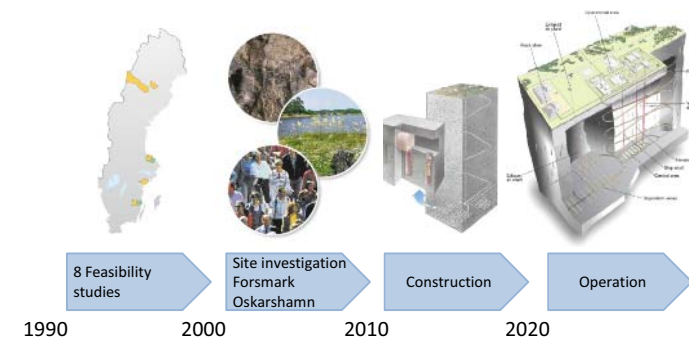
- Visitors center
- Infrastructure
- Local business development
- Spin off potentials
- Education and competence development
- Strengthening of job opportunities
- Extension of areas of work at Äspö
- Main office of SKB
- Canister factory
- Special projects in the area of energy RD&D and production



Strong local support for the final repository in Östhammar municipality



Time frame



Challenges

- To move from RD&D to industrialization
- To further strengthen the scientific base for the safety case
- To keep and develop the public confidence

