



# Living with Nuclear

by Louise Potterton

*In the Swedish city of Oskarshamn, public support for nuclear power and acceptance of nuclear waste is strong.*

**M**otorists driving towards Oskarshamn, southern Sweden, are greeted with large and colourful posters welcoming them to the 'Municipality with Energy'. Smaller signs warn them to 'be aware of moose'.

The picturesque peninsula where the Oskarshamn nuclear power plant is located is open to the public. (Photo: L.Potterton/IAEA)

Local attractions in this beautiful, coastal region include a boat trip around the five thousand islands, a museum dedicated to the Nordic country's most famous woodcutter and the 'Långa Soffan' — the longest and oldest wooden bench in the world.

But aside from the area's natural beauty, the cultural assets and that record-breaking bench, Oskarshamn also plays a pivotal role in the country's 40-year old nuclear power industry, which provides nearly 50% of Sweden's electricity with the remainder generated by hydropower.

The region is home to one of the country's three nuclear power plants, which operates three reactors, and the base for the interim storage facility for all of Sweden's spent nuclear fuel.

The underground laboratory, where research is carried out for a final repository for spent nuclear fuel, and the canister laboratory that is developing the copper containers for this disposal facility are also located in Oskarshamn.

As for the future, plans are underway to build the encapsulation facility in the Oskarshamn region where the spent fuel will be sealed in copper canisters prior to disposal.

Watching the locals taking a dip in the sea at one Oskarshamn's Baltic beaches, the children playing at a summer fête in the grounds of the power plant or the tourists enjoying a meal on the waterfront, it is clear that Oskarshamn is a place where people, the environment and the nuclear energy industry live side by side in harmony.

"In my opinion Oskarshamn is the world's most nuclear-friendly region," said Peter Wretlund, the Social Democrat mayor of the Municipality. "We've been living alongside the nuclear power industry for four decades and feel safe and secure about this."

His town hall colleague, Lennart Karlsson, the development manager for the region, which has a population of 26,000, added: "Everybody has a relative or knows somebody that is working for the industry. So it's an important factor as far as social security is concerned. Around 3,000 people depend on this industry for their income."

But it is not just the economic advantages that play a vital role in Oskarshamn's acceptance of the nuclear energy industry but also the transparency and openness of the companies that operate the plant and manage nuclear waste in the region. These companies offer public tours of their facilities and undertake extensive outreach work among local communities.

"There's a lot of openness from the industry itself and from the communications people that provide information to the local inhabitants," said Mr. Karlsson.

Rolf Persson, project manager for nuclear waste issues in Oskarshamn said: "The nuclear power plant is part of our daily life and it's been very successful with its openness regarding the way it operates."

"The people who live close-by are informed of what to do in case of an incident but this isn't something they're really concerned with. We haven't had any major incidents, but we were affected by Chernobyl and that's more in peoples' minds than our own plant."

The picturesque peninsula where the Oskarshamn nuclear power plant is located is open to the public. After purchasing the land, the company that owns and operates the three reactors, OKG, decided to renovate and maintain the houses in the village that date back to the 18th century.

OKG Communications Manager, Anders Österberg, explained the reason behind this approach: "It's based upon a strategic company decision to be open to the public in all communicative matters. It's important for the public to be able to come close to a plant and see for themselves that no dangerous operations take place there."

Visitors to the peninsula are invited to walk along the nature trail in the surrounding woods, see the nuclear power exhibition, or enjoy refreshments at the coffee shop watched by a herd of sheep against the backdrop of the stunning Swedish coastline and three nuclear reactors.

And for those members of the public who want to get a closer look inside the plant, tours can be arranged. Every year around 3000 visitors, many from Swedish schools, get an insight into the workings of a nuclear power station.



Local teenager, Simon, who has a summer job as a gardener in the grounds around the plant said: "It's good that they're so open and show the public how it all works. It's not a problem having the industry here, I don't feel scared or anything."

And pensioner, Waldy, who has lived in the vicinity of the plant site all her life and is showing a visitor from Stockholm around the exhibition, said: "I feel absolutely safe living here. The people in charge of

**Oskarshamn, one of Sweden's three nuclear power plants, which is located on the Simpevarp peninsula. Owned and operated by OKG, its three nuclear reactor units account for 10% of Sweden's total electricity generation. (Photo: L.Potterton/IAEA)**

the plant have it under control. I think it's very positive for the area."

During the summer months OKG runs a programme of activities that includes a bicycle race, a popular children's festival and a local handicrafts exhibition. And the plant itself is not a blot on this beautiful landscape. The three reactors feature bold, black stripes designed by a Swedish architect and said to symbolise 'the line of the forest against the sky'.

In 2007 Oskarshamn was named 'The Springfield of Sweden' by the Swedish daily newspaper *Sydsvenska Dagbladet*, referring to the fictional town in the American cartoon series 'The Simpsons'.

**About 84% of those who responded to the poll voted in favour of having the disposal site in their region, compared with just 41% in a nationwide poll.**

According to the newspaper Oskarshamn deserved this title due to the similarities between the two towns. They are both located on the coast, have a similar number of inhabitants, are roughly the same age and most importantly are home to a nuclear power plant.

The reporters even tracked down an equivalent to 'Moe's Bar' in the popular 'Kråkan' pub, compared the two town halls and found a likeness between Springfield mayor Joe Quimby and Oskarshamn's Peter Wretlund.

The article caused some laughter at the town hall but considering that the Springfield Nuclear Power Plant is notorious for its bad management at the hands of its sinister owner Montgomery Burns, OKG Communications Manager, Anders Österberg, was not particularly happy with the comparison.

"Of course there are some demographical similarities but when it comes to running a nuclear power plant there are no resemblances at all. In the world of cartoons everything is extremely exaggerated, otherwise it wouldn't be funny at all. In the real

world we take our power plant operations very seriously and therefore have a good safety record," he said.

Most of Sweden's nuclear waste operations are also based in Oskarshamn, run by the Swedish Nuclear Fuel and Waste Management Company (SKB), which is owned by the country's nuclear power companies.

SKB has a very active and energetic public information team for the Oskarshamn region, who visit schools, local businesses and run information stands at local events.

Four times a year residents also get a copy of the magazine 'Lagerbladet' where they can read about SKB activities in their region and members of the public are invited to learn more about nuclear waste management first-hand by visiting the facilities.

In addition, once a year the SKB ship that transports radioactive waste from Sweden's power plants to Oskarshamn is turned into a public information centre, complete with coffee shop, exhibition and guided tours.

Katarina Odehn is responsible for local public outreach at SKB in Oskarshamn: "Our main message is that nuclear waste is not an issue that you can say yes or no to. It exists and we have 5,000 tonnes of spent fuel at the interim storage site and need to find a solution for its safe disposal," she said.

She added that SKB wants to inform people about how they take care of the waste today and the solutions they have for the future, namely deep disposal for the spent nuclear fuel.

"We try to be very open with people and tell them that there are no stupid questions. Nuclear waste can be a difficult issue to understand but we explain our waste management work in an easy way."

"You can't force people to listen but you can be among people, be available to people. Sometimes people even call us at home after working hours with questions. We try to answer them and if we can't, we contact one of our experts and get back to the caller," said Ms. Odehn.

The trip to SKB's underground laboratory, which is based on the island of Äspö surrounded by lakes and forests, is one of Oskarshamn's most popular tourist attractions. Here visitors can get a glimpse into the future and witness a 'dress rehearsal' for a final repository for spent nuclear fuel.

At this unique laboratory, which is part of the IAEA's 'Network of Centres of Excellence' for underground laboratories, research is being carried out for the deep geological disposal of high-level radioactive waste.

Thirty countries around the world currently operate nuclear reactors, but there is still no facility in place for the permanent disposal of the spent nuclear fuel or high-level radioactive waste, which remains hazardous for up to 100,000 years.

One solution is to dispose of the waste in deep underground repositories and the consensus of the waste management experts internationally is that this system of geological disposal is the best option currently available or likely to be available in the foreseeable future. Several countries, including Sweden, Finland and France, have decided to move forward with this option.

A short bus ride through a tunnel takes tourists into the Swedish bedrock. Here they can touch rock that is 1.8 billion years old, taste 7000-year old water and more importantly see how spent nuclear fuel will be disposed of in the future.

In general visitors react positively to what they have seen. One schoolboy said, "I think it's a good idea to bury the waste underground, compared with some of the other ideas I've heard, such as sending it into space."

Others felt that there was too much information and one man commented: "I think it's important to make the spent fuel retrievable after putting it into the ground. Maybe it's too early to spend lots of money burying it and we should be looking at ways to reuse the energy in the spent fuel."

After 30 years of research and investigations, SKB recently announced that it has selected a location north of Stockholm for the final disposal of its spent nuclear fuel and it will submit permit applications for the construction of the repository in 2010.

If everything goes according to plan, the disposal will begin in around 2023. Oskarshamn was one of two sites selected in 2002 for the potential location for the repository, and a survey conducted in 2009 on behalf of SKB showed strong local support for the construction of the site in the municipality.

About 84% of those who responded to the poll voted in favour of having the disposal site in their region, compared with just 41% in a nationwide poll.

Oskarshamn Mayor Peter Wretlund said: "When it was announced that it would be constructed elsewhere in Sweden, people were very disappointed. There was a feeling of emptiness.

"I suppose we are quite laid back when it comes to these issues. For example, on April Fools' Day a local paper ran an article to say that the nuclear waste should be buried under the town's central park.


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There wasn't very much reaction to this, apart from some people asking whether this was really the best place!"

In Oskarshamn town centre, Maria, a waitress at a whole food cafe, said: "I've heard that in other countries with nuclear power some people are uncomfortable with it. I grew up here, and at first I didn't like the idea of living near a nuclear power plant, but over the years I've grown used to it.

"SKB does very good public outreach work, and I've been on the tours of the underground laboratory and the canister laboratory. People here in Oskarshamn were sad that we didn't get the repository for the spent nuclear fuel because it would have created jobs."

And beyond Oskarshamn, support for nuclear power in Sweden as a whole remains strong. In a recent EU survey on attitudes to nuclear energy 62% of Swedes questioned voted in favour of nuclear power.

In 2009 the Swedish government announced plans to lift a ban on the building of new reactors, overturning the 1980 referendum in which Swedes voted to phase out nuclear power. 

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