



# eTVONS

Photo: Hannu Huovila

**Practical housing at Olkiluoto Accommodation Village**

**Olkiluoto 2 is undergoing its largest outage ever this year**

**Regional co-operation continued at Olkiluoto**

**New project engineer for TVONS**



May  
2011

## Forerunner in nuclear power expertise

TVO Nuclear Services Ltd (TVONS) is a subsidiary of Teollisuuden Voima Oyj (TVO), offering you high-quality services from the TVO group. Our services cover the entire life span of a nuclear power plant and are based on over 30 years of experience and nuclear power know-how.

We have achieved excellent results with the help of our competent personnel and continuous improvement, and the internationally acclaimed availability factors of the Olkiluoto nuclear power plant are proof of this. Reliability in energy production is strong proof of competence.



## TVONS signifies

- fluent co-operation with companies and other parties, domestically and abroad
- design competence and solid practical skills
- honest pride in personal skills and willingness to share competence
- a responsible, planned and committed working culture
- high goals and relentless work to achieve them

## TVONS electronic client magazine

*Editor in Chief:*  
**Mikko Leppälä**

*Editors:*  
**Elina Mäkitalo, Riitta Tenlén, Susan Pietilä**

*Layout:*  
**Alasin Media Oy**  
[www.alasinmedia.fi](http://www.alasinmedia.fi)

*Publisher:*  
**TVO Nuclear Services Ltd**  
**Olkiluoto**  
**FI-27160 Eurajoki**  
**Finland**  
**Tel. +358-2-83 811**  
**Fax. +358-2-8381 809**

[www.tvons.fi](http://www.tvons.fi)



## ■ ■ ■ Editorial

# Safety can be improved by exchanging information and learning from experience

May  
2011

The earthquake, tsunami, and resulting severe nuclear accident that took place in Japan have shocked people all over the world. In recent weeks, people in the nuclear industry have been busy with Fukushima during their workdays, evenings, and weekends. It is an integral part of nuclear power and safety culture that, ever since the first day of the accident, we at TVO have also been following, researching and analysing the event and making decisions concerning what we can learn from this event, and how we could further develop our own plant units and working methods.

On the shore of the Baltic Sea, we are relatively safe from large earthquakes and tsunamis. Nevertheless, in the spirit of continuous improvement, we have continued to improve the safety features of Olkiluoto NPP over the years in many ways. Earthquake tolerance, cooling water availability, and electricity supply have all been improved, among other things. We have also analysed approximately 50 different natural phenomena related to land, sea, and air, as well as their combinations, and subsequently made preparations.

Only the coming months and years will show the true consequences of Japan's accident to the nuclear power industry. Even though the good properties of nuclear power, such as the fact that it helps to control climate change, have not disappeared, it is obvious that the general acceptability of nuclear power will now be evaluated from an entirely new viewpoint.

One of the consequences of Fukushima has been obvious: people's interest towards nuclear power has increased tremendously. An unprecedented amount of information regarding nuclear power has been made available. Magazines and websites have been full of nuclear power articles and related commentary. People have been for and against it, as is fitting for an open society.

The communication departments from the nuclear industry have been even more active than before in sharing information and interacting with citizens. This has also been our policy at Olkiluoto. However, we have been surprised by how, in addition to visitors from Finnish media, the number of visitors from foreign countries has also multiplied. Both international media and various decision-makers and experts have visited us to discuss how Olkiluoto NPP manages safety, and how we

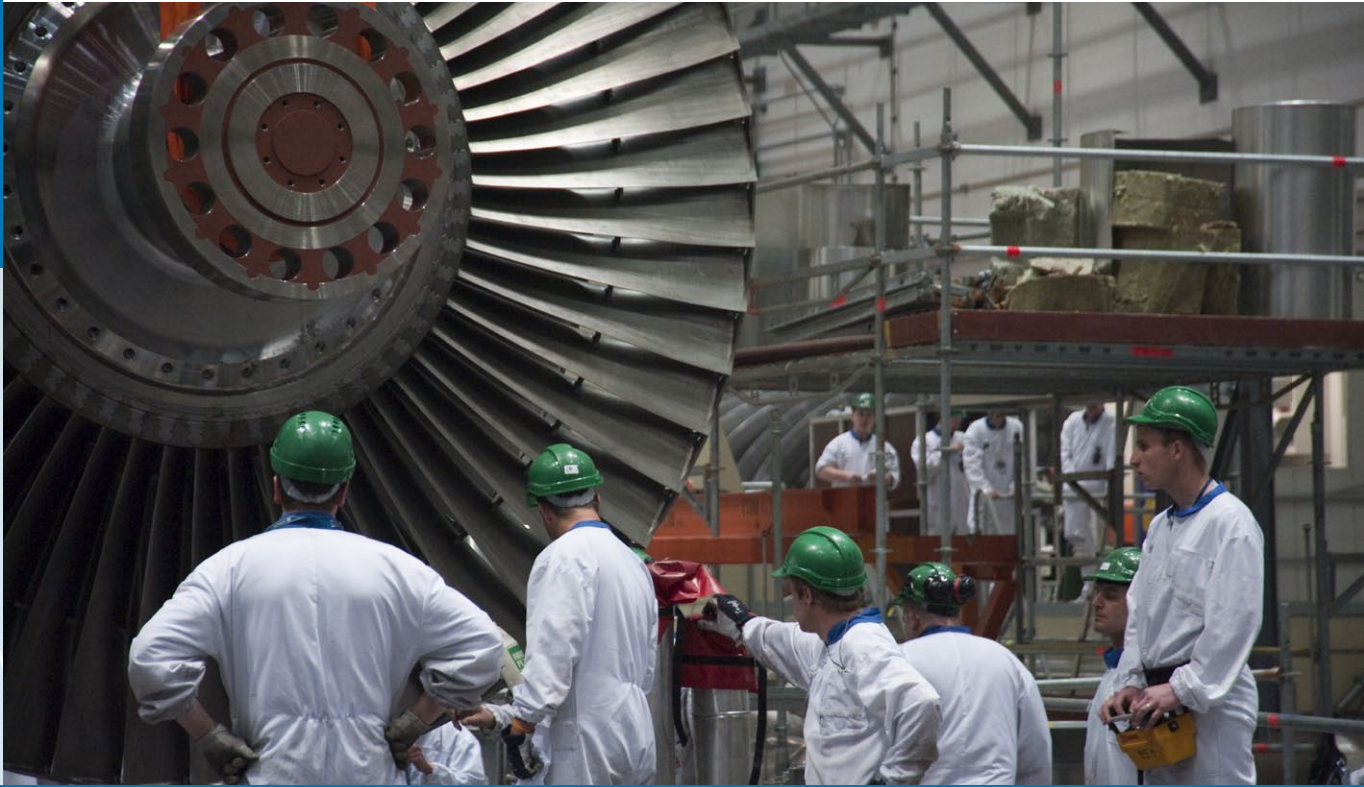
distribute information regarding nuclear power in the neighbouring regions and Finnish society in general.

It has been nice to notice that, while the tidal waves of debate are escalating in many countries, Finland is looked to for advice on a responsible, interactive nuclear power discussion. We Finns excel at being pragmatic, open, and honest. We seldom undergo dramatic turns of events, and the citizens rely on the expertise of authorities and decision-makers. Despite this, we maintain an open dialogue, which is a good thing.

Finnish nuclear power expertise is in high demand. This has also been witnessed by TVONS while delivering several projects involving nuclear power plant safety culture, plant unit improvements, and waste management to different countries. The nuclear power industry is used to sharing information and learning from experience. I dare say that, due to the information exchange and development activities initiated by the events at Fukushima, nuclear power plants will be safer than ever before in a few years.

**Anna Lehtiranta**  
SVP, Corporate Relations  
Teollisuuden Voima Oyj





May  
2011

## Olkiluoto 2 is undergoing its largest outage ever this year

**Plant unit 2 of Olkiluoto NPP is undergoing large modifications this year. Last year, similar modifications took place at Olkiluoto 1.**

The annual outages for 2011 started in the beginning of May with a refuelling outage for OL1. In addition to refuelling, OL1 only underwent its normal, annual service this year.

The service outage for OL2 started after OL1's outage, and it is estimated to complete in early June.

- The most significant work tasks in the annual outage for OL2 include the modernisation of the I&C for condensate purification and the replacement of the low pressure turbines, generator, low voltage switchgears, and steam extraction ducts. We are also replacing the seawater pumps and the inner isolation valves of main steam lines. In addition to the above tasks, we are carrying out approximately 100 smaller modifications, says **Veli-Matti Inkinen**, Outage Manager for TVO.

### Outages are planned in the long term

- Outages are planned ahead for several years. Larger modifications are completed during outages approximately every five years. The planning of large projects takes several years. More detailed planning for the spring outages of next year is started in the autumn of the previous year, Veli-Matti Inkinen explains.

The subcontractors required for the outages are hired well in advance. This year, a little over 1,000 subcontractor employees will participate in the outages. Approximately 80 per cent of the employees are from Finland. For shorter periods, the outages also involve workers from all over Europe,

*Text: Susan Pietilä.*

such as Sweden, Germany, the United Kingdom, and Switzerland.

Over the past few years, the outage personnel of both TVO and its subcontractors have changed due to retirement, for example. According to Inkinen, however, outage work competence has been flexibly transferred from older to younger workers. Sales Manager **Lauri Kuivalainen** from TVONS is one of the participants of TVO's outages. He has participated in outage work supervision tasks for several years.

- Participating in outage work provides a welcome change from normal office work, says Lauri Kuivalainen.

### Marketing for Olkiluoto Accommodation Village in full swing

TVONS took over the marketing and rental activities for the Olkiluoto Accommodation village in the beginning of April. The Accommodation Village is mainly marketed to companies working at Olkiluoto. The Olkiluoto Accommodation Village has been chosen as the primary accommodation for subcontractors at TVO's annual outages, for example. In total, there are nearly one thousand beds available. Rooms are rented either individually or in larger quantities. Companies may request a bundle offer for housing several people.

The builders of Olkiluoto 3 will also continue to use the Olkiluoto Accommodation Village as their housing. The benefits of staying at the Olkiluoto Accommodation Village include the proximity of the worksite, varied activities and a quiet environment.

### TVONS exports expertise

In addition to marketing accommodation services, TVONS is also involved in marketing TVO's expert services. TVO has over 30 years of experience in services covering the entire lifecycle of a nuclear power plant. For example, outages throughout the years have accumulated valuable experience in arranging induction training for nuclear power plant workers. The training needs to be redone every three years, and each year brings a number of new participants.

Through TVONS's marketing activities, TVO's trainers and Radiation Protection experts have given lectures regarding best practices at Fortum's Loviisa NPP as well as the plant units in Sweden and Russia. The cooperation in the field of maintenance with Russian and Swedish nuclear power plants goes back several years. TVONS has also supplied special tools that are required for service to nuclear power plants in Loviisa in Finland and Forsmark in Sweden.



The annual outages each spring are the busiest time of the year for Outage Manager Veli-Matti Inkinen.



May  
2011

## Regional co-operation continued at Olkiluoto

Next year marks the 20th anniversary of the regional co-operation between Finland and Russia.

In March, TVONS arranged two regional co-operation seminars at Olkiluoto together with the Finnish Radiation and Nuclear Safety Authority (STUK).

A total of eight people from Sosnovyi Bor NPP and the authority of Rostekhnadzor participated in the seminars. The starting day at the Visitor Centre along with the plant tours on the final day were common for both groups. For the rest of the time, the seminar attendants were split into two groups by subject.

One seminar involved the safety culture of new power plants. The main lecturer was TVO's safety culture development manager **Petri Koistinen**, who explained the concept of safety culture in general, self-assessment, and human factors at Olkiluoto NPP. TVO's ongoing Human Performance (HU) 2012 project was also presented. Furthermore, the attendants received a technical presentation of OL3 and a presentation regarding the development of safety culture at the OL3 worksite.

The second seminar dealt with training activities and personnel development.

- The seminar lectures dealt with TVO's training activities, the training database, the annual training programme, and the renovation of induction training, says group manager **Jaana Isotalo**, who was responsible for preparing the curricula for both seminars.

- We also had a comprehensive presentation regarding the basic training, advanced training, and simulator training of operators, and visited the OL1/OL2 simulator, Isotalo says.

The regional co-operation, which involves the Kola and Leningrad NPPs in addition to the Russian supervisory authority, has developed over the years in terms of both content and arrangements. The seminar days involve rich discussion and an exchange of ideas regarding the presented issues. As before, the Russian visitors gave presentations regarding their practices. Senior inspector **Jouko Mononen** from the Radiation and Nuclear Safety Authority gave the authority's opinion on current issues.

- In 2009, we observed the need to start co-operation with Leningrad NPP regarding the training of personnel for new power plants and operator licensing for these plant units. Later, we also included safety culture in the co-operation, says Mononen, who has been involved in the regional co-operation since 1999.

- In my opinion, the safety culture and training seminars arranged simultaneously at Olkiluoto were one of the most successful seminars in a long series. The topics of the seminars were challenging, but we were able to reach a common understanding. The participants from



The delegation from Leningrad NPP, led by Alexander Moskvin (on right), studied the Visitor Centre's exhibition guided by Mika Tanhuanpää (second from right). Regional inspector Natalia Shevchenko (second from left) from Rostechnadzor was also present.

Leningrad NPP and TVO were experts in their fields, which sometimes resulted in extensive discussions that made the seminar presentations longer than intended. Detailed content planning for the seminars and carefully thought-out practical arrangements have improved the use of our limited seminar time. Safety culture was found to be a topical subject for both parties, and we already had the next co-operation seminar in April at Leningrad NPP, Jouko Mononen continues.

- Seminars such as these are very important, says **Alexander Moskvin**, Vice Manager of the Training Centre at Leningrad NPP.

- Each participant increases their personal know-how. The issues we discuss are applicable at our own plant unit as well as in the training of staff, says Moskvin, who has often attended seminars himself.

The aim of the regional co-operation is to prevent nuclear and radiation accidents in Finland's neighbouring regions.

» The topics of the seminars are interesting. The experience is very important for those visiting Olkiluoto for the first time. There's something new every time.»

- Alexander Moskvin





## Practical housing at Olkiluoto Accommodation Village



**The Olkiluoto Accommodation Village is located on the island of Olkiluoto, close to the Olkiluoto nuclear power plant. The New and Old Villages can accommodate nearly 1,000 people at one time. When working at Olkiluoto, the Accommodation Village offers you a short distance to work, beautiful Finnish nature, and good hobby opportunities, such as fishing.**

### Room for choice

The Old Accommodation Village, built in the 1970s and renovated several times since, is located inside the power plant area, and thus offers a very short distance to work. The New Village is located outside the power plant area, approximately 2 kilometres from the main gate. The New Village was built between 2005 and 2006, and it offers a high standard of work accommodation. The village offers services such as a grillroom/café, laundry, sauna, and Internet connectivity to ensure comfort even during a longer stay.

The Accommodation Village lets you choose between a studio, single room, and double room. The single and double rooms mainly have a shared living room, bathroom, and kitchen facilities. Some of the rooms, however, have their own WC and shower.

- This variety provides the customer with flexibility concerning accommodation. For example, it may make sense for a company that employs several

people at the nuclear power plant to rent a multiple-room apartment with rooms for all the employees. The common social facilities allow for spending leisure time with others, says Sales Manager **Lauri Kuivalainen** from TVONS. On the other hand, the studio with its own entrance, kitchen, and bathroom allows for privacy, if so required.

The rooms and common facilities are cleaned several times a week. The area is maintained by RTK-Palvelu Oy. The linen and towels are also replaced periodically, making it easy for the customer to settle in.

- The most important issues are the comfort of the customer and trouble-free housing in the village, Kuivalainen says.

### New directions

TVO Nuclear Services Ltd took over the marketing, maintenance, and management of the Accommodation Village on 1 April 2011. The village is owned by Teollisuuden Voima Oyj.

- In terms of practical arrangements, the transfer of administrative responsibility does not affect the operation of the accommodation village; we manage accommodation as before, says the **Housing Manager** from TVO. There may be some changes to the reservation systems, for example, but these are intended to support our customers.





# Accommodation Village



- We need to make it as easy as possible for the customer to reserve accommodation for the desired time, says **Mikko Leppälä**, Managing Director for TVONS.

- Currently, most of the customers in the village are builders working on the Olkiluoto 3 project. The current large outages on TVO's operating plant units, Olkiluoto 1 and 2, significantly increase the number of customers. Approximately 500 outage workers from Finland and abroad stay in the accommodation villages, mainly the New Village, the Housing Manager explains.

## Housing Manager guides customers

The Housing Manager assists the customers of the Olkiluoto Accommodation Village in all housing-related practical issues. The Housing Manager can be reached by phone at +358 (0)2 8381 6095 and by email at [majoitus@tvo.fi](mailto:majoitus@tvo.fi).

During the summer, a dedicated website with a reservation service will be set up for the Accommodation Village. The site will also contain all the practical information and contact details required to stay at the village and to make a reservation.

Further information regarding the Olkiluoto Accommodation Village and housing is also available from Lauri Kuivalainen, [lauri.kuivalainen@tvo.fi](mailto:lauri.kuivalainen@tvo.fi).



Accommodation buildings.



Fishing at Olkiluoto.



## International projects keep TVONS's new project engineer busy

**Juha Pääkkönen started work at TVONS in the beginning of this year. However, the new project engineer did not have long to arrange his desk before TVONS's international projects fully employed him.**

### TVONS's projects focus on Eastern Europe

Projects in Eastern Europe have generated significant amounts of work for TVONS in the past few years. Currently, Juha is primarily employed by a Ukrainian project that uses Western safety culture as a starting point to introduce severe accident procedures to three pilot units.

- After the three-year project, in 2014, Ukraine will begin applying the principles from the pilot units to other nuclear power plants in the country, Juha says. Ukraine has 15 running nuclear power plant units with a total capacity of 13,800 MW, and the plan is to increase capacity by building new units and replacing old ones to achieve a total capacity of 20,000 MW by 2030.

Juha has mainly been involved with contract and quality issues in the Ukrainian project.

- Producing contract texts for the consultant group and subcontractors takes up most of my time, Juha states. The project in Ukraine is funded by the European Commission, and the national portion of the project is managed by the National Nuclear Energy Generation Company (NNECC) Energoatom. The project was started in Kiev in the beginning of 2011. At the same time, TVONS is involved in regional co-operation in Russia, especially the Smolensk and Novovoronezh nuclear power plants.

### Processes under control

Juha has also had time to renew TVONS's activity manual, which was introduced in 2009. Process descriptions and renewals are Juha's core competences, as he was involved with the quality and activity processes in several companies before transferring to TVONS. During his last employment at TVO, he took one year to complete a renovation of the activity processes based on current procedures.

- The activity processes are a part of the activity manual. The work is completed during the summer, as the new activity manual is delivered to the Radiation and Nuclear Safety Authority (STUK) for approval. After approval, the manual is taken into use at TVO, says Juha concerning his work at TVO.

- The work at TVONS has taught me a lot. For example, the EU project has given me new experience in project administration, Juha says.

In his free time, Juha enjoys reading books about camping and the outdoors.

- We go trekking and play badminton with a friend, which balances out the work well, Juha says. Four grandchildren also keep the project engineer busy.