

Challenges for a TSO supporting both the regulator and industry

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A typical TSO supporting both the regulator and industry is a TSO in a relatively small country that has only a few nuclear power plants in operation or in construction. The paper reflects and discusses the challenges met by such a TSO mainly using the VTT Technical Research Centre of Finland (VTT) as the example case. In Finland the TSO role of VTT was born along with the construction of the first four NPP units in the country during the late 1970's and early 1980's. In particular, for the two Loviisa VVER-440 type plant units there was a need of independent analysis tools and expertise both for the regulatory side and for the side of the plant owner. During the past four decades the challenges for VTT as a TSO that has continued to support both the regulator and the industry have also changed due to changes in the domestic and international operational environment. There are also changes in the VTT itself, such as changes in funding structure from a governmentally funded organisation to an organisation with only 25 percent or less in the near future from the governmental budget. The TSO needs from the domestic regulator are fairly predictable with fairly large annual changes of the need of TSO services. Such a situation forces VTT to continue to support also the domestic nuclear operators as well as to continue to enhance operation with foreign regulators and industry. The major challenge for a TSO supporting both the regulator and industry is to avoid conflicts of interest and simultaneously maintain the impartiality and transparency. The paper provides information on the principles applied at VTT and discusses the practical application of these principles.

Another challenge for a TSO is to create, maintain and enforce the required competences (experts, tools, facilities). In Finland the national research programmes in reactor safety and waste management have a key role in ensuring that the country possesses the required competences. The particular feature of these programmes is that all key players of the country including both the regulator and the industry are represented in the decision making bodies. These programmes and their role for VTT as the main research partner are described.

Additional challenges for a TSO supporting both the regulator and industry include prioritising the customer needs, making strategic decisions on participation in future tasks in Finland and abroad and making strategic decisions on acquiring new major research facilities, such as the VTT Centre for Nuclear Safety.

The paper concludes with a short discussion on the lessons learned during the existence of VTT as a TSO in the nuclear energy area.

Country or International Organisation

Finland

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