Land use and environmental policy

FINGRID

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Fingrid's land use and environmental policy

Fingrid Oyj is the national transmission system operator responsible for the functionality of the Finnish power system in accordance with the Electricity Market Act. We are responsible for over 14,000 kilometres of transmission line, more than 100 electricity substations, and several reserve power plants. We carry out long-term planning for the power system for the years ahead while being aware of investment needs. We participate in reaching climatic goals by enabling the connection of new energy production to the main grid. In developing the transmission system, our goal is to minimise electricity transmission losses in a cost-effective manner, thereby improving energy efficiency.

Fingrid's Code of Conduct is available on our website. We recognise the impact of our operations on land use and the environment. We abide by legislative obligations and anticipate future changes. We are a pioneer in main grid transmission system life cycle management and take land use and environmental impact into account in our planning, construction, operative and maintenance operations, as well as when decommissioning old parts of the grid.

A responsible approach to land use and environmental issues is a part of the daily routine for all Fingrid employees. Our operating model is based on solid procurement expertise, as our operations on work sites and in the field are outsourced to service providers and contractors. We commit our service providers and contractors to our responsible operating methods by means of contractual terms and requirements, training, and audits.

We assess our operations and develop our operating methods continuously. We participate in research and development work relating to the electricity transmission system and its impact on land use and the environment, including the possible health effects of electric and magnetic fields.

Transmission lines

In accordance with the nation-wide land use objectives stipulated in the Land Use and Building Act, the objective is to primarily utilise existing rights-of-ways in the **planning** of transmission line routes. Before constructing new lines, we utilise the existing grid's transmission capacity as effectively as possible. When planning new transmission line routes, we seek solutions that avoid the immediate proximity of residential areas.

When planning transmission line routes we take into account existing available environmental data, compatibility with other land use in the area and perspectives that arise during interaction with stakeholders. Our aim is to minimise detrimental effects within the limits of public interest and technoeconomical boundary terms. We mitigate negative impact on land use, the landscape and nature through the location of towers and technical solutions (such as field towers and markers to decrease bird collisions). We make sure that the electric and magnetic fields caused by the transmission lines remain under the recommended maximum values. When **building** a transmission line we aim to cause minimal damage to the environment, landowners and local residents. During construction however we prioritise the sufficiency of supply and system security, which can limit work phase scheduling to periods when there is ground frost or to another environmentally suitable time. We inform landowners of construction work in advance, we repair or reimburse damages, and clean up the sites.

Through transmission line **maintenance** we make sure that the transmission line structure and area remain safe and compliant with electricity safety regulations. We agree on fees for the use of private roads necessary for transmission line inspection and maintenance operations in accordance with fee recommendations. We notify landowners in advance of major maintenance, we repair or reimburse damages, and clean up the sites.

When clearing line areas and handling border zone trees, personal safety and transmission line system security take priority. We take into account natural values and special sites such as yard areas. Transmission line areas are cleared mechanically by applying selective clearing, which means that junipers and low-growing vegetation are left in the transmission line area. In individual cases, the environmental impacts of the clearing of transmission line areas are relieved for scenic reasons and due to recreational uses, for example by applying more frequent clearing cycles. We encourage the versatile utilisation of transmission line areas as long as electrical safety is secured. We support research concerning the useful applications and natural conditions of transmission line areas.

Trees in the border zone of the transmission line area are managed either by cutting their tops or by felling excessively tall trees altogether, depending on the stage of the trees' management cycle. Helicopters are not used for cutting the tops of trees in the immediate vicinity of housing. We inform landowners in advance of both the clearing of transmission line areas and of the management of border zone trees. The management of yard areas is always subject to an agreement with each particular landowner.

At the **end of the life cycle of a transmission line**, we recycle any dismantled materials. Whenever tower structures are dismantled, we also remove underground concrete foundation pillars from yard and field areas.

Substations and reserve power plants

In the planning phase of substations and reserve power plants, we investigate other land use in the area and environmental perspectives in addition to electrical safety. Our aim is to avoid locating new reserve power plants or transformer substations in groundwater areas. We pay special attention to risk management and to pre-emptive damage control through technical solutions, such as protective structures and monitoring equipment for potential leaks. We influence airborne emissions from reserve power plants by means of technical solutions, control and automation systems, as well as the method in which trial operations are carried out to secure plant start-up.

In the vicinity of housing, we can alleviate the impact of new substations and reserve power plants on the landscape. We set restrictions on noise emissions when selecting new equipment for substations.

During the construction phase, we take care of the site's waste management and chemical safety, and prevent noise, vibrations and dust. At sites where blasting work is required, we survey the buildings in the surrounding area in advance. We communicate the construction work to the neighbourhood in advance.

We control the environmental impact of **maintenance** using technical solutions and by means of monitoring, inspections and safe working practices. Our service providers are professionals. We train them in environmentally safe operating methods, including in situations involving accidents and disturbances. Only necessary chemicals are processed and stored at substations and reserve power plants.

When substations and reserve power plants are **renovated and when their structures are demolished or replaced**, we utilise and recycle all structures and devices. We pay special attention to the safe handling of chemicals and preparedness concerning oil spills.

Land use planning, rights of use of transmission line areas, land acquisition

We participate actively in land use planning and give **statements concerning the various levels of land use planning**. This ensures the impact assessment concerning land use reservations and related adjacent areas, required by the development of the electricity transmission system. In addition, we guide community planning and construction taking place in the vicinity of the transmission grid by issuing safety instructions and statements concerning land use restrictions.

In the **redemption procedure** for the rights of use to new transmission line areas, our primary aim is to negotiate with landowners and receive advance consent for transmission line routes. When renewing lines, rights of use are updated in accordance with the redemption procedure by listening to landowners and compensating additional disruption. We follow the development of the redemption procedure and principles of compensation and actively participate in them.

With regard to the acquisition of land for plots for substations and reserve power plants, our point of departure is primarily to engage in voluntary trade. The purchase price is determined openly and fairly. If necessary, the redemption procedure can be used to acquire plots.

Interaction and communication

We take landowners and other concerned parties into account when we plan, construct, operate and maintain the transmission system. If necessary, we reach an advance agreement on work and vegetation management on landowners land. The environmental impact assessment for transmission line projects together with the related interaction is an important part of our transmission line planning.

We provide information on our operations openly and fairly, and we collect feedback. We process the feedback received to develop our operations further.

We communicate land use and environmental issues as part of our responsibility reporting. We are open to receiving suggestions for improvement.

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