

Norðurorka hf. (Nordurorka Ltd.)

Introduction

Nordurorka was established in the year 2000 through the merger of Akureyri Electricity Utility and Akureyri Heating and Water Utility. This merged of Akureyri Utilities was taken in several steps and one can say that it started when the owner Akureyri Municipality decided in 1986 to unite under one executive committee the Water Utility of Akureyri, Electrical Utility of Akureyri and Heating Utility of Akureyri, there after named The Utility Committee. Six years later The Water Utility and The Heating Utility where merged into one company.

The story of these Utilities is of course interwoven with the history of the town and local people struggle for better living standards and modern amenities. The first water supply utilities were established in the early twentieth century by the local people of the town and each individual was also part owner in the company. Eventually Akureyri Municipality took over these first two private Water Utilities and they merged into new Municipality Company, Akureyri Water Utility founded in the year 1914.

Akureyri Electrical Utility has a fairly long history. The debate about the need for production of electricity and distributing system started already before 1900. Many things however led to delays, shortage of money, and the war in Europe so politicians had to prioritize. But in the year 1922 the first Hydro power station was started in the local river Glerá which today runs through the middle of the town.

It can be said that the story behind the establishment of Akureyri Heating Utility is even longer than the Water and Electrical Utilities. The debate about the possible establishment of district heating began in the third decade of the last century, when use of geothermal water for district heating began in several parts of the country, for example Reykjavík District Heating. The case was widely discussed and several attempts made in research and drilling in known geothermal areas in the vicinity of the town. In the so called oil crisis in the seventies new attempts were made in research and research drilling which led to the conclusion that sufficient water could be found in geothermal areas in Hrafnagilshreppur now Municipality of Eyjafjarðarsveit. In the year 1977 geothermal water was for the first time released to the central heating system of the Residential home for elderly people in Akureyri and remark the establishment year of Akureyri District Heating Utility.

Nordurorka Ltd.

In the years that have passed since the final merge of Akureyri Municipality Utilities was completed and Nordurorka began operations in 2000 there have been significant changes in the company.

On December 13th in the year 2002 Althingi, Icelandic Parliament, adopted law on transitions of Nordurorka from Municipality Company to Limited Company and the “new” company started operating on January 1st in the year 2003. This decision was linked to changes in legislation regarding separation between production and sale of electricity on one hand and distributing of electricity on the other hand. Also it was linked to possible mergers with other Utilities in surrounding areas.

Following this, it was decided to buy stocks in the company Fallorka Ltd. which worked on the development of power plants in the Municipality of Eyjafjarðarsveit. Previously Nordurorka Ltd. had concluded an agreement to acquire the entire production of the hydro power plant. With this there was laid the foundation for Fallorka Ltd. as a daughter company who would take care of production and sale of electricity while Nordurorka Ltd. would take care of distributing electricity and of course water utility and heating utility.

In the year 2014 Nordurorka took over the operation of the sewer utility in Akureyri and plans to build sewage treatment plant for the municipality.

Expansion and additions to the company's service area

In the year 2003 the Heating Utility of Svalbardseyri Municipality established in 1980 merged with Nordurorka Ltd. and The Municipality became a shareholder in the company. Also in the year 2005 the Svalbardseyri Water Utility merged with Nordurorka Ltd. Both distributing system required major maintenance and renewal and efforts have been directed to the improvement of the utilities.

With the merger of Hrísey Municipality with Akureyri in the year 2004 it was decided that Nordurorka Ltd. would buy the Heating and water Utilities of Hrísey. Since then significant improvements have been made on the distributing system and also the pumping equipment and controls in the processing area.

In 2005 Nordurorka Ltd. bought Olafsfjordur Municipality Heating Utility and the purchase price was paid in cash (the municipality did not become a shareholder).

In 2005, work began on the first phase of Reykja-Utility named after a farm in the valley Fnjoskadalur which has for a long time been known as a geothermal area, but Akureyri Municipality bought the land in two phases in the year 1983 and 1995. The first phase of the Utility was from Reykir area to Illugastadir. The same year there was concluded agreement between Nordurorka Ltd. on the one hand and the Municipalities

of Grytubakkahreppur and Thingeyjarsveit on the other hand to lay distributing system 60 km down the valley of Fnjoskadalur to the town of Grenivik.

In the year 2008 the Heating- and Water-Utility of Eyjafjardarsveit Municipality merged with Nordurorka according to agreement between the parties. The purchase price was paid in cash and shares in Nordurorka Ltd.

Above one can see the substantial changes that have occurred within Nordurorka Ltd. through mergers with other utilities, through acquisitions and/or creation of new utility area. The big change, so to speak, of course, also lies in the expansion of distribution systems, water supply, electricity and district heating in Akureyri Municipality.

Previously mentioned the big change within Nordurorka Ltd. was when the company followed the adoption of new Electricity Act which requires separation between distributions of electricity on the one hand and of production and sales on the other hand. The daughter company Fallorka ltd. now take care of production and selling but Nordurorka Ltd. the concession part of the electric utility which is building up, operating and maintaining the distribution system in Akureyri. In the time that has passed since the establishment of Electricity Utility in Akureyri, in the year 1922, it has expanded its distribution network in line with the expansion of the town. The aim has always been to ensure operational security in delivery. Today there are two electricity substations in Akureyri and 107 distribution stations.

As previously mentioned, the water utility is the oldest part of Nordurorka Ltd. founded in 1914 and its distribution system has just as the electricity utility system grown with the expansion of the town. In the beginning, the processing area for the Water Utility was in Hlidarfjall the mountain above Akureyri. But water consumption increased rapidly and water shortages soon started to occur in certain circumstances. To begin with, the issue was resolved by increasing reservoir but new processing areas where needed. In the year 1958 new springs in Glerardalur valley were put into use and again in the year 1973 new processing areas in Horgardalur valley were taken in to use. The service area for this part of the water utility is Akureyri Municipality and Hörgársveit Municipality.

Today (2013), the population of Akureyri is over 18 thousand (including 172 in the island of Hrísey and 85 in the island of Grímsey), but was 2.000 when the Water Utility was founded in 1914 and 2.685 when the Electricity Utility was founded in 1922. The population grew steadily but it must also be kept in mind that in addition to local people there are also businesses that have to be provided with high levels of water. This part of the customer group may also change at short notice and therefore its consumption can have a major impact on the capacity of each utilities and that has been the case over the years. This involves large industrial companies both linked to agriculture and fisheries, and as we know, there have often been significant and

relatively rapid changes in the number and size of these companies over the years. As an example the largest single customer in water consumption today is aluminium foil plant, Bercomal in Krossanes, while fish and shrimps were among the biggest customers for a relatively few years.

The year 2003 became a major transition in the operation of Nordurorka Ltd. heating distributing utility when a lot of hot water was found when drilling in a new production area in Arnarnes in the Municipality Arnarneshreppur. This area had for some time been objected to research and a research drilling. It soon became apparent that the geothermal area in Arnarnes is very rich and there are now two holes that give an average 109 liters per second, which is about 60% of the total volume of water that is being processed in geothermal areas in Eyjafjordur. It is clear that the new production area at Hjalteyri in Arnarneshreppur has had a profound and positive effect on the company's potentials and therefore a very positive effect on the operations and financial condition of the company for many years to come.

The company's operations

It can be said that the traditional utility business is characterized by research, production, distribution and sales. Research refers to the need to provide necessary information about the resources that are the basis of the services provided by the company. The history of the company shows the need to look forward in search for suitable production areas for drinking water, electricity and geothermal energy utilization.

If research demonstrate a potential production areas it is necessary to seek agreements with the relevant landowners for permission to use, or to purchase, specific regions and/or rights. After determining the processing area and completed of necessary agreements needed, preparation of processing can be started, dam construction, drilling for hot water, collecting spring water or drilling wells for example.

Following this it is then necessary to build infrastructure to bring the product to customers, pipes, trunk lines, substations, and pumping stations and so on, with the necessary distribution lines and home installation and then take care of the operation and maintenance of these systems.

The characteristics of Nordurorka Ltd. utilities are the unique positions of the customers because they are utilizing the services of the company continuously around the clock every day of the year. Powerful and reliable systems are a prerequisite for being able to maintain a high level of service and there are rarely an event of termination services for maintenance and troubleshooting. It is important that the company possesses a strong group of employees who handle both new construction

and maintenance of systems and that they have the necessary equipment to carry out their own work with precision and safety.

To ensure the quality of products and services Nordurorka ltd. has developed a quality system which has been certified according to ISO 9001 standard codes. Factor in the certified quality system is the water quality control, HACCP and electricity safety. Also Nordurorka ltd. was the first utilities in Iceland to establish an internal control system for all sales meters for all utilities of the company which also is part of the certified quality system. Thus, quality system covering all activities of Nordurorka ltd. facilitates and improves the decision-making process, ensure product quality and leading to more efficient and better service to customers. Aspect of its quality system, planned process improvements by listing findings and comments are analyzed and improvements identified in the form of major reforms.

To ensure operational business is very important to ensure preventive maintenance of all systems. To keep track of this project is used with a Maintenance Management System (DMM) which held the record of all major equipment systems and define how the control and the frequency of the note, and thus the inclusion of control, necessary actions and termination of a defined maintenance and / or replacement parts, equipment, etc.

Strategy and vision

According to our strategy the purpose of the company's is distribution of electricity, processing, distribution and sale of hot water and drinking water. Furthermore, the company is engaged in necessary research and search for usable geothermal energy and potable water to meet the needs of customers at any time.

One of the most important aspects of the company is planning and preparation services to business customers in the future, but in this regard one need to look decades ahead. A large part of this is to ensure future production areas for hot and cold water through research of potential areas. It also needs to contract for research with the landowners and, as appropriate, awarding contracts for construction authorization or purchase of the land and/or rights. Investigations Section has Nordurorka ltd. outsourced through contracts with the Icelandic energy research (ISOR), which has also seen the so-called progress monitoring of the geothermal areas Nordurorka ltd. uses.

In the same way the company needs regular work to reassessment, as the case may redesign its systems taking into account the changes and growth of the communities the company serves. Into such an assessment also direct additions and expansion of the distributions system when new areas are taken under the processing area.