A few years ago, Mitter Transporte (a fuel transporting company) in the suburban town of Haid outside the central Austrian city of Linz felt strongly the currents of change—and its managers responded.

“It was clear that we had to incorporate wood supply into our business,” recalls Michael Nagl, the company’s fuel procurement manager. “The sooner the better!”

The pressures to move toward renewable fuels in Upper Austria, one of the country’s nine states, have converged from the state, national, and international levels. The European Union (EU) has adopted an initiative to increase to 20 percent by 2020 its share of all energy produced by renewable fuels (the current level is 8.5 percent), and to reduce carbon dioxide emissions by 20 percent in the same period—an initiative known as “20/20/20.”

EU member countries have until 2012 to develop action plans for achieving the 20/20/20 goals. The EU’s executive branch, the European Commission, has set legally binding individual renewable energy (RE) targets for each member country to meet, with stiff monetary “infringement” penalties if they don’t.

Austria has been among the most aggressive EU nations in developing RE uses—and Upper Austria has been a leader within the country, ahead of most of Europe, in implementing both efficiency and RE measures. Both the national and state governments are providing strong incentives to reduce fossil-fuel heating; Upper Austria has set a target of zero fossil fuels used for space heating by 2030.

While EU incentives are going to large research and development projects, and Austrian federal incentives are supporting large RE and biomass projects, Upper Austria has made a major commitment of funds for incentives to support residential, commercial, and district energy installations—efficiency, RE, biomass, and pellet installations. The state’s Biomass Action Plan has set challenging goals for increasing biomass district energy use in towns and cities, and for speedily ramping up the use of pellet boilers in residences and businesses. The state’s “Heat with Pellets” educational campaign has placed billboards all over Upper Austria.

Renewing a Business with Tested Expertise

It was clear to Mitter’s managers that they could not viably stick with a business model based on transporting fuel oil. They responded, first, by searching out reliable sources of top-quality pellets (Austria has well-defined quality standards for different grades of pellets, based on ash content, type of wood used, moisture content, pellet size, and more).

Next, the company bought a pellet-delivery truck and trailer. Both the truck and trailer can hold 12 tonnes (13 US tons) of pellets, about enough to do six to eight home deliveries.

The demand for pellets was rising quickly and Mitter reacted by buying a second truck. It started delivering pellets from Vienna in the east all the way to Innsbruck in the west. Now, Mitter was running two trucks and transporting fuel from two different pellet manufacturers.

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The business leaders didn’t stop there. “Our transport business has been successful over the years because we understand our customers and their needs,” Nagl says. “We saw that we had to better understand the heating needs of our customers, just as we are experts in oil delivery.”

So the company decided to install its own pellet boiler system, to heat three buildings with a total area of about 1,200 square meters (13,000 square feet)—its offices, its truck garage, and a maintenance shop.

Managers chose a Hargassner packaged boiler plant with two 49 kW pellet boilers (170,000 Btu/hour) capacity each. The system was delivered on a single truck, in two pieces that were essentially concrete boxes: the boiler room and the storage bin, the latter with a 22-tonne (25 US-ton) capacity.

The system manufacturer needed just two days to drop the boiler room and the storage-system boxes onto a concrete slab, bolt them down, put in the boilers, and connect the electrical and piping system, the latter to supply and return piping that Mitter had laid in from the three buildings to the slab.

In early 2009, one month after starting the project, Mitter was heating with pellets. The investment was €75,000-80,000 ($95,000-$105,000 US), partly defrayed by a government subsidy.

The new system displaces more than 15,000 liters (4,000 US gallons) of oil per year at a price of €1 per liter ($5 US per gallon) for a total oil savings of €15,000. Now, Mitter burns pellets at €215 per tonne ($200 US per US ton) and expects that the system will pay for itself within five years.

Each of the boilers automatically removes ash to a drawer, which is emptied periodically. Fuel is moved automatically from the storage bin to the adjoining boilers.

The heating system has been in operation only since the end of March 2009—too early to know the amount of pellets that will be used each year. Mitter Transporte is confident that the system will be a success.