



*Marcel Knöri, project manager for energy data, St.Gallen, says:*

"Our data are entered every year in ECOSPEED Region, where missing details regarding the energy consumption are automatically supplemented by the comprehensive national statistics in the system. We are able to create and export energy and CO<sub>2</sub> balances at the push of a button. The detailed evaluations then reach the local communities later as energy data sheets. This service is particularly appreciated by the local communities without an energy plan."

**Web link**

[www.umwelt.sg.ch/home/Thememen/Energie/energieDaten.html](http://www.umwelt.sg.ch/home/Thememen/Energie/energieDaten.html)

## 77 climate balances at one stop – St.Gallen offers local communities a top service

The Canton of St.Gallen comprises 77 local communities. Eight local communities are larger than 10,000 inhabitants, 22 have between 5,000 and 10,000 inhabitants, and 47 local communities have fewer than 5,000 inhabitants. The energy legislation of the Canton of St.Gallen stipulates that local communities with more than 7,000 inhabitants must create an appropriate energy plan. A local community energy and CO<sub>2</sub> balance forms the essential basis for this. In order to create comparable, updatable, and high-quality balances for all local communities, the Canton of St.Gallen uses the web-based software solution ECOSPEED Region.

### Initial situation: Cantonal energy plan, energy legislation & promotion program

With the cantonal energy plan passed in the year 2008 and supplemented in the year 2013 to include the subarea of power, the Canton of St.Gallen is taking its orientation from the vision of the '2000-Watt society'. Here, it is aimed to achieve a per capita power requirement of 2000 Watts (which corresponds to around 1/3 of today's energy consumption) and per capita emissions of 1 t of CO<sub>2</sub> per year, which is to be achieved by the year 2100. For the first implementation stage up to the year 2020, the following three main objectives have been specified:

1. Increase overall energy efficiency by 20% in comparison with an uninfluenced development
2. Reduce CO<sub>2</sub> emissions by 20% in comparison with the year 1990
3. Renewable energies achieve a contribution of 20% of total energy consumption

In the area of electricity, another aim is to achieve a moderate rise in power consumption of a maximum of 8% in comparison with the year 2010.

Although only the area of heat is legally prescribed for the local community energy plans, a holistic approach (e.g. including power and mobility) is recommended. The energy legislation is accompanied by cantonal and in part also local community energy promotion programs that provide financial support for specific measures.

### The challenge: monitoring energy and CO<sub>2</sub> for 77 local communities

In order to track the measures of the cantonal energy plan, the Office for the Environment and Energy of the Canton of St.Gallen (AFU) has decided to set up a central energy database. In so doing, the information content of the data is to be retained, uniform calculation ensured, and the comparability between local communities enabled.

Uniform monitoring of the local community energy consumption levels and the associated CO<sub>2</sub> emissions for all 77 local communities comprises data provision, calculation of missing data, uniform calculation, all the way to uniform reporting of all levels.

### Solution with ECOSPEED Region

With close coordination between the Canton of St.Gallen and ECOSPEED, the ECOSPEED Region software was set up for all 77 local communities and a specific interface was implemented for import of the local community data. Then ECOSPEED Region used the figures for population and employment to calculate an opening

balance (top-down estimate on the basis of national and canton figures). To conclude, it was possible to import the bottom-up data made available by the Canton of St.Gallen for all 77 local communities via the defined interface at the push of a button.

The procedure for the opening balance and importing bottom-up data is repeated from that point on every year. This includes quantity matrix data (inhabitants, employment, energy procurement area) and above all the energy consumption per energy carrier, power and district heating mix, as well as the local generation of renewable energies. The calculation with ECOSPEED Region enables optimum results to be obtained from the available data: in that the missing data are supplemented as precisely as possible and that all the desired results (final energy, primary energy, CO<sub>2</sub> emissions for final and primary energy, environmental impact points, air pollutants) are calculated. This enriches the available bottom-up data of the local communities and makes comprehensive data available for reporting.

The Canton of St.Gallen creates an 'energy data sheet' from these results every year for each local community with all the relevant information. This is published in the internet.

In addition, interested local communities can apply for access to the ECOSPEED Region software at any time; central use by the canton means they receive attractive special terms and conditions from ECOSPEED.

#### **Summary**

The implementation of the central platform ECOSPEED Region has enabled the Canton of St.Gallen to provide all 77 local communities with a comprehensive service in the form of annual energy and CO<sub>2</sub> balances. At the same time, the comparability and data quality can be ensured and also guaranteed for subsequent years. This means that the Canton of St.Gallen enables all 77 local communities to create energy plans and derive specific measures.

#### **ECOSPEED Region for updatable energy and CO<sub>2</sub> balances in regions**

With our versatile software solutions, we help you make your climate auditing even simpler and more efficient. More solutions can be found on our website at <http://www.ecospeed.ch/region/en/>