
Our name is our mission: Our services and products contribute to global Sustainable Energy and Resources Availability, for the peaceful development of society.

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1 About us

Our name is our mission: Our services and products contribute to global Sustainable Energy and Resources Availability, for the peaceful development of society.

SERA's services address the interface of Research, Public administration and Business consulting, in order to promote innovation for a sustainable future. SERA's knowledge base is our active participation in research projects and our constant collaboration with universities.

We are creative, solution-oriented, reliable, and flexible in terms of timing. Our services are tailor-made and we develop the best solution together with our clients. We work for companies and public institutions.

Our fields of work:

- Energy efficiency and renewable energy technologies in buildings, industry, and agriculture, including product development with natural materials
- Sustainable site development, smart cities and energy in spatial planning
- Climate change and migration

Dr Susanne Geissler is the owner and managing director of the company. SERA global GmbH is the successor organisation to SERA energy & resources e.U., operating from August 2012 until July 2019, also owned and managed by Dr. Susanne Geissler. Changing the organizational structure became necessary due to the expansion of business activities. Dr Susanne Geissler has been active since 1991, as expert and in leading management positions, such as member of the executive board and head of department Resources and Risk Research of the Austrian Institute of Ecology, head of unit Renewable Energy and Natural Resources of the University of Applied Sciences Wiener Neustadt, head of department Buildings and Heating of the Austrian Energy Agency, managing director of the Austrian Sustainable Building Council, owner and managing director of the consulting engineers office SERA energy & resources e.U.

She holds university degrees in the area of Natural Science and Technology from the University of Natural Resources and Applied Life Sciences, Vienna / Institute of Structural Engineering (Dr.nat.techn.), Graz University of Technology (Diploma in Environmental Engineering), University of Graz (Mag.rer.nat.), and Danube University Krems (European Law, MLS Master of Legal Studies). Photovoltaic Planner, EXAA Electricity Exchange Trader Certificate, continuing education in Economics, Science Journalism, and Didactics.

SERA has been teaming up with proven experts to provide tailor-made solutions for our clients.

2 Activities

SERA's services address the interface of Research, Public administration and Business consulting, in order to promote innovation for a sustainable future.

We support Public administration in implementing European law, as well as Businesses with strategic decisions how to improve the efficiency of utilising energy and natural resources. In International cooperation and development, SERA's work focus is on Ensuring access to affordable, reliable, sustainable and modern energy for all, and on Sustainable Cities and Communities (Sustainable Development Goals).

SERA's knowledge base is our active participation in research projects and our constant collaboration with universities.

2.1 Services

2.1.1 Public administration

We support in the implementation of European law. With a holistic view, we are able to identify synergies and make use of them in order to actually achieve the goals of the Energy Union and tap the full potential of positive effects without placing an additional burden on the administration.

We assist public administration in achieving real improvements in terms of energy efficiency and user comfort, CO₂ reduction, and reduction of environmental loadings in general. Therefore, creating or improving a sound data basis and checking procedures are always an important part of our work.

References:

- Salzburg Provincial Government, Department Energy management and consulting
- City of Vienna, Department Energy planning

2.1.2 Business consulting

We assist with strategic decisions in the area of energy and natural resources, for example by tackling the following questions together with companies interested in making truly sustainable decisions, for the own company and beyond:

What is technically feasible, but is currently failing economically due to the general conditions?

What is legally possible, but fails due to lack of will and misinformation?

What is economically successful, but has negative social and ecological impacts locally and/or abroad?

Where is there medium-term economic potential due to changing framework conditions?

Together we will find the right balance for your company and the path to a sustainable future.

2.1.3 Reviews and evaluations

We certainly get the best out of your team. Even for very well running projects, there is usually room for improvement. Reviews and evaluations by uninvolved third parties support you in continuously improving your performance.

References:

- Project reviews and project evaluations: e.g. SOLTRAIN (SADC) <https://www.soltrain.org/>

2.1.4 International cooperation and development

We know the challenges our partners face and together we develop solutions that work in practice.

Our work focuses on Sustainable Development Goal 11 (SDG11) Sustainable Cities and Communities, and Sustainable Development Goal 7 (SDG7) aiming at ensuring access to affordable, reliable, sustainable and modern energy for all. Both have a key role in achieving other Sustainable Development Goals.

References:

- SADC region, ECOWAS region

2.1.5 Sustainable site development in West Africa

We assist public administration, planning teams, and PPP developers in creating low-CO₂ livable districts and cities.

African cities face multiple challenges due to migration and population growth, in particular with regard to affordable, uninterrupted, and low-carbon electricity supply for all the services needed for housing, education, health care, recreation, business, and transport. We apply the bioclimatic concept which has the potential to provide sustainable solutions in terms of energy efficiency and CO₂ savings, job creation for the local economy, and affordability of buildings for users.

References:

- Abia State/Nigeria
- Delta State/Nigeria

2.2 Applied research and market development

Selected examples are described below:

smartKB* - Reduction of cooling requirements through optimised urban structures and processes and design optimisation in building design

Based on a systematic listing of appropriate methods, recommended actions are developed to reduce the cooling requirements in new or renovated buildings on three levels: optimisation and use of appropriate urban structures, design strategies and passive measures for building concepts and reduction of cooling requirements through integrated planning processes. For more information see: <https://nachhaltigwirtschaften.at/en/hdz/projects/reduction-of-cooling-requirements-through-optimized-urban-structures-and-processes-and-design-optimisation-in-building-design-smartkb.php> (full report in German)

LEKOECS - combined economic-ecological life cycle assessment model

The consumption of ecological and economic resources over the whole life cycle is supposed to be anticipated and optimised in the design process of buildings and refurbishments. A combined life cycle assessment model together with an economic-ecological base element catalogue considering the klima:aktiv criteria was developed based on the structure of the life cycle cost model LEKOS and the ecological valuation tool Ecosoft.

For more information see: <https://nachhaltigwirtschaften.at/en/hdz/projects/lekoecos-combined-economic-ecological-life-cycle-assessment-model.php> (full report in German)

2.3 Teaching

Course of lectures on “Smart cities, spatial planning and energy concepts” for University of Applied Sciences FH Technikum Wien, Master’s Programme Renewable Urban Energy Systems

https://www.technikum-wien.at/en/study_programs/master_s/renewable_urban_energy_systems/

Lectures on “Climate protection and quality assessment of buildings” for Danube University Krems, Master’s Programme Building Innovation <https://www.donau-uni.ac.at/de/studium/building-innovation-meng.html>

Supervision of master theses for University of Applied Sciences FH Wien der WKW, Studienbereich Immobilienwirtschaft (Real Estate Management) <https://www.fh-wien.ac.at/immobilienwirtschaft/>

3 Project websites

3.1 ENERFUND – Making use of EPC data for increasing the renovation rate

Project type: Market development | Project area: Europe | Client: Horizon 2020 / 695873 | Period: 02/2016-04/2019

ENERFUND was a project funded by Horizon 2020 and has been **developing the ENERFUND tool to assess and compare opportunities for deep renovations in terms of their prospects of success.**

The ENERFUND tool provides the basis for decision-making for:

Companies: investment strategies and development of energy services

Municipalities: targeted regional development and promotion instruments

Public authorities: development of policy instruments

The underlying method was developed in the project. Most important data source is the Energy Performance Certificate according to EPBD. The ENERFUND tool has been filled with data from more than 12 countries and tested with stakeholders during the project. At the end of the project, the tool is generally accessible. Operation is already ensured for the period after the end of the funded project. Project team: 15 partners from 12 Member States. More information: <http://www.enerfund.eu/>

3.2 SCDA Smart City Demo Aspern - Seestadt aspern

Project type: Research and consulting | Project area: Austria | Client: ASCR | Period: 09/2014-12/2018

Vienna's Urban Lake Side stands for one of the largest urban development projects in Europe and also for one of the largest smart city demonstration projects in Austria. Supported by the Climate and Energy Fund, Aspern Smart City Research GmbH (ASCR) as consortium leader and the project partners have created a test area on three building plots - kindergarten/classroom, student dormitory and residential building - in which questions about the future of energy efficiency will be answered. **We have worked together with the users of selected buildings in Seestadt Aspern to better understand consumer habits and users' requirements and expectations regarding products and services related with energy efficiency and renewable energy use in buildings.** Based on our findings, we have provided input for technical research and development as well as input for the development of sustainable energy-related services for the future. Living research in the Smart City demo project of the Climate and Energy Fund: <https://www.klimafonds.gv.at/press/seestadt-aspern-gelebte-forschung-im-smart-city-demoprojekt-des-klima-und-energiefonds/>

3.3 GINGER - User behaviour and the impact on the operation of nearly zero energy buildings

Project type: Research | Project area: Austria | Client: FFG | Period: 07/2012-06/2014

The study examined the influence of user behaviour on the operation of low-energy and plus-energy buildings, differentiated according to social, societal and intercultural aspects as well as gender aspects in particular. This resulted in more tailor-made solutions for product development and communication as well as for the planning process. A broad spectrum of building typologies was investigated (large-volume residential buildings, office and administration buildings, school buildings, kindergartens, educational campuses), which have been newly built in the last five years to the passive/plus energy house standard or renovated to the lowest energy standard. The entire process - from the start of planning to the current operation - was taken into account. From this, findings for planning and construction as well as for product development were derived: During planning and construction, conclusions are drawn on the timely involvement of users in the run-up to the project and on adequate advice and information for operation and use. With regard to input for product development, the focus was on building services equipment and control engineering.

4 Publications and download

4.1 Electronic publications

Recent Open Access Articles in peer reviewed journals:

- Susanne Geissler, Alexandros G. Charalambides and Michael Hanratty, **Public Access to Building Related Energy Data for Better Decision Making in Implementing Energy Efficiency Strategies: Legal Barriers and Technical Challenges**, *Energies* 2019, 12(10), 2029; <https://doi.org/10.3390/en12102029>
- Susanne Geissler, Doris Österreicher and Ene Macharm, **Transition towards Energy Efficiency: Developing the Nigerian Building Energy Efficiency Code**, *Sustainability* 2018, 10(8), 2620; <https://doi.org/10.3390/su10082620>

QUALICHeCK publications:

- Erhorn H., Erhorn-Kluttig H., Geissler S., Wouters P.: Source book on Guidelines for better enforcement of quality of the works, Brussels 2016. QUALICHeCK Report <http://qualicheck-platform.eu/wp-content/uploads/2017/02/QUALICHeCK-source-book-Works.pdf>
- Durier F., Geissler S., Wouters P.: Source book for improved compliance of Energy Performance Certificates (EPCs) of buildings, Brussels 2016. QUALICHeCK Report <http://qualicheck-platform.eu/wp-content/uploads/2017/02/QUALICHeCK-source-book-EPC.pdf>

Concerted Action EPBD publications:

- Geissler S., Altmann N. (2015): CT1 Thematic Report - How to make the best use of EPCs, available at: <https://www.epbd-ca.eu/wp-content/uploads/2011/05/CA-EPBD-How-to-make-use-of-EPCs.pdf>
- Geissler S., Altmann N. (2015): CT1 Report Certification – Overview and Outcomes, available at: <https://www.epbd-ca.eu/outcomes/2011-2015/CA3-CT-2015-1-Certification-web.pdf>

Other online publications:

- Geissler S. (2017): Three times smart: Users, Buildings, and Electricity Grid <http://www.buildup.eu/en/node/55235>
- Ipser C., Geissler S., Radinger G., Winkler M., Floegl, H. (2015): smartKB* - Reduction of cooling requirements through optimised urban structures and processes and design optimisation in building design, *Berichte aus Energie- und Umweltforschung* 15/2015, Bundesministerium für Verkehr, Innovation und Technologie <https://nachhaltigwirtschaften.at/en/hdz/projects/reduction-of-cooling-requirements-through-optimized-urban-structures-and-processes-and-design-optimisation-in-building-design-smartkb.php> (full report in German)
- Ipser C., Floegl H., Mötzl H., Huemer-Kals V., Radosch U., Geissler S. (2014): LEKOECS-combined economic-ecological life cycle assessment model, *Berichte aus Energie- und Umweltforschung* 49/2014, Bundesministerium für Verkehr, Innovation und Technologie <https://nachhaltigwirtschaften.at/en/hdz/projects/reduction-of-cooling-requirements-through-optimized-urban-structures-and-processes-and-design-optimisation-in-building-design-smartkb.php> (full report in German)

4.2 SERA Working papers

SERA working paper March 2019: Public accessibility of building-related energy performance certificate data to support energy efficiency and climate protection actions

Abstract: It is an important goal of the EU's Climate and Energy Policy to improve the energy efficiency of the European building stock and to reduce CO₂ emissions. Data is needed for informed decision making and to identify cost efficient large-scale building renovation projects. Based on the Energy Performance Certificate, since more than 20 years there has been the chance to build a data pool on the building stock which should now be made accessible to be useful for various purposes. For example, for identifying areas for large-scale renovations, for developing new products and services, and for energy spatial planning with a focus on exploiting renewable energy potentials, all these measures serving to increase energy efficiency and reducing CO₂ emissions. This article describes the differences in approaches by Member States to the issue of public accessibility of spatially located energy performance certificate data and deals in particular with the protection of personal rights and data privacy. It is shown that the building address can be classified as a personal or non-personal data depending on the context, and the resulting consequences are discussed.

5 Network

Research and development collaboration in Austria

Danube University Krems, Department for Building and Environment:

The Danube University Krems is the leading university of continuing education. The University specifically focuses on interdisciplinary, cross-linked, future-oriented fields of specialization.

<https://www.donau-uni.ac.at/en/university/faculties/education-arts-architecture/departments/building-environment.html>

Universities of Applied Sciences:

- University of Applied Sciences FH Wien der WKW, Studienbereich Immobilienwirtschaft (Real Estate Management) <https://www.fh-wien.ac.at/immobilienwirtschaft/>
- University of Applied Sciences FH Wiener Neustadt, Institut für Unternehmensgründung & Innovation (Business Creation and Innovation) <http://www.fhwn.ac.at/FHWN/Wissenschaftliche-Einheiten/Institute/institut-fuer-unternehmensgruendung-und-innovation>

Membership and partners

ÖGUT (Austrian Society for Environment and Technology) <https://www.oegut.at/en/>

IISBE (International Initiative for a Sustainable Built Environment) <http://www.iisbe.org/>

DECA (Energy Services Companies Austria) <https://www.deca.at/>

BEUC (Building Energy Environment Cluster) <https://www.ecoplus.at/about-us/clusters-technopols/clusters-in-lower-austria/>

Green Energy Lab <https://www.greenenergylab.at/>

6 Imprint and data protection

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As a rule, it is possible to use our website without providing personal data. Personal data is all information about a specific person, such as for example name, address, telephone number, e-mail address. If you leave your contact data or contact us for further information, you consent to the processing of your personal data. Of course, we handle your data with great care and use them exclusively for the purpose of sending you the requested information and only for as long as is necessary to do so. At your request, you will receive free information about which personal data about you has been stored. If you wish your personal data to be deleted, please inform us and we will comply with your request immediately.

If you believe that the processing of your data violates the data protection law or your data protection claims have otherwise been violated in any way, you can complain to the supervisory authority. In Austria, this is the data protection authority.

Please do not hesitate to contact us for further information:

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