

Administration Buildings:

- MK6 Office and Administration Buildings, Düsseldorf** (2015)
- DGNB, thermal building simulation, Life Cycle Costs (LCC), life cycle assessment (LCA)
Architect: msm architects, Cologne
Client: aurelis Real Estate GmbH & Co. KG, Duisburg
GFA: 29.000 m²
- Sumitomo Electric Hartmetall, Willich** (2015)
- Thermal building simulation of reference areas and total building
Architect: Ralf Königshofen, Neuss
Owner: Sumitomo Electric Hartmetall, Willich
Client: Goldbeck West, Münster
GFA: 3.500 m²
- REWE Administration Building, Rosbach** (2015)
- Thermal building simulation, DGNB
Architect: Heinrich + Steinhardt architects, Bendorf-Sayn
Owner: Delius Verwaltung GmbH & Co., Pullach im Isartal
Client: Hundhausen GmbH, Siegen
GFA: 7.700 m²
- Steinel, Herzebrock-Clarholz** (2015)
- Thermal building simulation
Architect: Heitmann architects, Gütersloh
Client: Heitmann architects, Gütersloh
GFA: 3.000 m²
- Revitalisation of Tripol-Haus, Wiesbaden-Erbenheim** (2015)
- Thermal building simulation, 3D-flow simulation, energy consulting
Architect: Lammel, Wiesbaden
Owner: Farinula Grundstücksverwaltungs mbH & Co., Mainz
Client: Farinula Grundstücksverwaltungs mbH & Co., Mainz
GFA: 12.000 m²
- Mitsubishi Electric Europe B.V., Ratingen** (2014)
- Thermal building simulation, 3D-flow simulation for 2 reference rooms
Architect: kresings gmbH, Münster
Owner: RS& Partner GmbH, Düsseldorf
Client: Mitsubishi Electric Europe B.V., Ratingen
GFA: 16.000 m²
- B3 teamtechnik, Freiberg a. Neckar** (2014)
- Energy consulting, structural physics, thermal building simulation, EnEV
Architect: KMB, Ludwigsburg
Owner: teamtechnik, Freiberg a. Neckar
Client: DAL GmbH, Mainz
GFA: 2.500 m²
- Funke Mediengruppe** (2014)
- Thermal building simulation
Architect: AllesWirdGut, Wien
Client: Funke Mediengruppe, Essen
GFA: 43.500 m²
- W-E-G Administration Gerloser Weg, Fulda** (2014)
- Energy consulting, simulation
Architect: von Halle, Berlin
Client: W-E-G Stiftung, Fulda
GFA: 1.300 m²
- Brooks Münster** (2014)
- Thermal building simulation
Architect: Goldbeck West GmbH, Münster
Client: Goldbeck West GmbH, Münster
GFA: 3.300 m²
- Administration Building Theodorstraße Düsseldorf** (2014)
- DGNB-Certification, life cycle costs (LCC), life cycle assessment (LCA)
Architect: K6 architects, Düsseldorf
Owner: IDR, Düsseldorf
Client: K6 architects, Düsseldorf
GFA: 15.000 m²

- Administration Building S47 Schießstraße 47-49, Düsseldorf** (2014)
- Thermal building simulation, summer insulation
Architect: AJF architects, Düsseldorf
Owner: BEMA DEVELOPMENT GmbH, Düsseldorf
Client: b 30 GmbH & Co. KG, Düsseldorf
GFA: 17.500 m²
- Office and Production Building GOM, Braunschweig** (2014)
- Thermal building simulation Marktplatz and open foyer
Architect: Bühring architects, Gifhorn
Owner: GOM GmbH, Braunschweig
Client: Goldbeck Nord, GmbH, Bielefeld
GFA: 7.000 m²
- SEW Office and Warehouse Building, Garbsen** (2014)
- Energy consulting, simulation
Architect: Treder & Buchwald, Garbsen
Owner: SEW Immobilien GmbH, Garbsen
Client: Ottensmeier Ingenieure GmbH, Paderborn
GFA: 5.400 m²
- iBuilding Brüninghoff, Heiden** (2014)
- Energy consulting, thermal building simulation
Architect: ACMS architects, Wuppertal
Client: Brüninghoff GmbH & Co. KG, Heiden
GFA: 2.200 m²
- DSV Habacker, Krefeld** (2014)
- Simulation of open atrium
Architect: Architekturbüro Lietz, Kürten, Goldbeck West, Monheim
Owner: Habacker Holding, Düsseldorf
Client: Goldbeck West GmbH, Monheim
GFA: 8.400 m²
- Heinrich-Konen-Straße, Bonn** (2014)
- Thermal building simulation
Architect: Goldbeck West, Monheim
Client: Goldbeck West, Monheim
GFA: 11.000 m²
- Office Building VW R, Wolfsburg-Warmenau** (2013)
- Thermal building simulation
Architekt: BDH - Berghof – Dohmann – Herlich, Dortmund
Client: Goldbeck West GmbH, Bielefeld
GFA: 4.000 m²
- OneSubsea, Celle** (2013)
- Thermal building simulation
Owner: OneSubsea Lux German Holdings SARL, Luxemburg
Architect: Goldbeck-West GmbH, Langenhagen
Client: Goldbeck West GmbH, Bielefeld
GFA: 7.000 m²
- Börsentor 13-15, Frankfurt am Main** (2013)
- 3D-daylight simulation within DGNB-Certification
Architect: HPP architects, Düsseldorf
Client: Projektgesellschaft Börsentor, Frankfurt a. Main
GFA: 4.600 m²
- Vodafone Campus Düsseldorf** (2013)
- Operational optimisation, thermal building simulation, 3D-flow simulation
Architect: HPP, Düsseldorf
Client: Vodafone GmbH, Düsseldorf
GFA: 86.000 m²
- Headquarters Jungheinrich AG, Hamburg** (2013)
- DGNB-Certification, daylight simulation, ecological building advice, life cycle costs (LCC), Ökobilanz (LCA)
Architect: Prof. Klaus Sill + Assoziierte GmbH, Hamburg
Client: Jungheinrich AG, Hamburg
GFA: 18.000 m²

- Hotel and Office Center Cubus Seestern, Düsseldorf** (2013)
- DGNB-Certification, study for facade (adjustable double facade), simulations, life cycle costs (LCC), life cycle assessment (LCA)
Architect: Schneider und Schumacher, Frankfurt
Owner: Köllmann Verwaltung, Wiesbaden
GFA: 31.000 m²
- Coeur Cologne, Cologne** (2012)
- Simulations, LEED-preliminary evaluation, DGNB-Certification, ecological building advice, life cycle assessment (LCA), life cycle costs (LCC)
Architect: msm architects, Cologne
Owner: Allianz Real Estate Germany, Stuttgart
GFA: 20.000 m²
- Beumer Group Administration, Beckum** (2012)
- Expert opinion to building physics, energy consulting, simulation
Architect: Heitmann architects, Gütersloh
Owner: Beumer Group, Beckum
Client: Heitmann architects, Gütersloh
GFA: 7.500 m²
- Spreebogen, Berlin** (2012)
- Energy optimisation, accompaniment of the pilot project
Architect: SPK architects, Berlin
Client: omniCon mbH, Frankfurt am Main
GFA: 29.000 m²
- Omicron Campus, Klaus (Österreich)** (2012)
- 3D-flow simulation, thermal building simulation, concept development, planning participation
Architect: Dietrich | Untertrifaller und Eichinger Offices, Wien
Client: Omicron Electronics GmbH, Klaus (Österreich)
GFA: 13.500 m²
- Trianel Headquarter, Aachen** (2012)
- Dynamic building simulation, 2D-flow simulation, head of planning
Architect: gmp, Aachen
Client: gmp, Aachen
GFA: 9.500 m²
- WBI-Center, Weinheim** (2012)
- Thermal building simulation
Owner: WBI-Center Grundstücks GbR, Aachen
Client: Goldbeck Süd GmbH, Hirschberg
GFA: 3.000 m²
- Stadttor Heidelberg** (2012)
- Thermal building simulation
Architect: SSV/motorplan, Heidelberg
Client: pit Plan GmbH, Heidelberg
GFA: 12.000 m²
- C.O.R., Düsseldorf** (2012)
- Thermal building simulation, daylight simulation
Architect: RKW, Düsseldorf
Client: C.O.R., Straelen
GFA: 15.000 m²
- Headquarters DHPG, Bonn** (2012)
- Thermal building simulation
Architect: Prof. Schmitz architects GmbH, Cologne
Client: Goldbeck West GmbH, Langenfeld
GFA: 5.500 m²
- DTKS (Deutsche Telekom Kundenservice GmbH), Düsseldorf** (2012)
- Thermal building simulation, flow simulation
Owner: Bö69 Projektentwicklung GmbH, Düsseldorf
Architect: Goldbeck West GmbH, Langenfeld
Client: Goldbeck West GmbH, Bielefeld
GFA: 20.000 m²

Plus Energy Revitalisation Hansastraße, Bottrop (2012)

- Plus-Energy concept and building physics
Architect: planquadrat, Darmstadt
Owner: Oliver Helmke, Bottrop
Client: EcoCommercialBuilding Program der Bayer Material Science, Leverkusen
GFA: 1.000 m²

Belsenpark, Office and Commercial Building MK2.1, Düsseldorf (2012)

- DGNB-Certification, simulations, ecological building advice, life cycle costs (LCC), life cycle assessment (LCA)
Architect: SOP architects, Düsseldorf
Client: omniCon mbH, Berlin
GFA: 17.000 m²

Belsenpark, Office and Commercial Building MK 3, Düsseldorf (2012)

- DGNB-Certification, simulations, ecological building advice, life cycle costs (LCC), life cycle assessment (LCA)
Architect: SOP architects, Düsseldorf
Client: omniCon mbH, Berlin
GFA: 8.000 m²

Baufeld H, Frankfurt Airport (2012)

- Thermal building simulation, building physics
Architect: AS&P Albert Speer & Partner GmbH, Frankfurt am Main
Client: Kempen Krause Ingenieurgesellschaft, Aachen
GFA: 36.000 m²

zeb/i-land, Münster (2012)

- Green building design, building simulation, flow simulation, controlling
Architect: Kresing, Münster
Client: zeb/immobilien, Münster
GFA: 24.000 m²

Miele Administration, Gütersloh (2012)

- Green building design, building simulation, controlling
Architect: Heitmann architects, Gütersloh
Client: Miele & Cie., Gütersloh
GFA: 19.500 m²

CologneKitas Administration, Cologne (2012)

- Expert opinion to building physics
Architect: Nebel Pössl, Cologne
Client: Nebel Pössl, Cologne
GFA: 450 m²

Ohligsmühle, Wuppertal (2012)

- DGNB-certification in silver, simulations, ecological buildings advice, life cycle costs (LCC), life cycle assessment(LCA)
Architect: HPP architects, Düsseldorf
Client: Projekt Ohligsmühle, Wuppertal
GFA: 13.000 m²

Rheinparkcarree, Monheim (2012)

- Thermal building simulation for single rooms
Architect: Goldbeck West GmbH, Langenfeld
Client: Goldbeck West GmbH, Langenfeld
GFA: 7.000 m²

Kontorhaus Arnulf Park Munich (2011)

- DGNB-Certification, ecological building advice, life cycle costs (LCC), life cycle assessment (LCA)
Architect: Lederer Ragnarsdóttir Oei, Stuttgart
Client: omniCon, Frankfurt am Main
GFA: 25.000 m²

Vodafone Campus Düsseldorf (2011)

- Controlling
Architect: HPP, Düsseldorf
Client: die developer, Düsseldorf
GFA: 86.000 m²

Antonsgasse 1-5, Cologne (2011)

- Building Certification, expert opinion, green building design
Architect: msm meyer schmitz-morkramer, Cologne
Owner: Metropol Immobilien und Beteiligungs GmbH, Cologne
GFA: 2.000 m²



- Windkraft Simonsfeld AG, Ernstbrunn, Österreich** (2011)
- Energy concept, thermal building simulation, controlling
Architect: Reinberg ZT GmbH, Wien
Owner: Simonsfeld AG, Ernstbrunn
GFA: 1.400 m²
- Mercedes Benz Distribution Deutschland, Berlin** (2011)
- DGNB-Certification in silver, ecological building advice, life cycle costs (LCC), life cycle assessment (LCA)
Architect: Gewers + Pudewill, Berlin
Client: omniCon, Frankfurt am Main
GFA: 29.000 m²
- FIE NOR, Bochum** (2011)
- Thermal building simulation,
Architect: Kemper Steiner & Partner, Bochum
Client: KF-Grundstücksgesellschaft, Bochum
GFA: 3.000 m²
- Stadtwerke Münster Office Building Hafeweg, Münster** (2011)
- DGNB-Certification in gold, thermal building simulation, life cycle costs (LCC), life cycle assessment (LCA)
Architect: behet bondzio lin architects, Münster
Client: Stadtwerke Münster, Münster
GFA: 3.500 m²
- Kolpinghaus, Cologne** (2011)
- Thermal building simulation, management
Architect: Holzhüter, Aachen
Owner: Kolpingwerk Deutschland, Cologne
GFA: 3.000 m²
- CUBES, Düsseldorf** (2011)
- Thermal building simulation, daylight simulation
Architect: msm meyer schmitz-morkrammer, Cologne
Client: Trümper Overath Heimann Römer, Bergisch Gladbach
GFA: 14.500 m²
- Innovation Center Westpfalz BIC, Kaiserslautern** (2011)
- Thermal building simulation, flow simulation
Architect: plan art GmbH, Kaiserslautern
Client: Dr. Dahlem, Rodenbach
GFA: 5.000 m²
- Wachendorff, Bergisch Gladbach** (2011)
- 3D-daylight simulation in offices
Architect: bpa Busch architects, Cologne
Client: ISRW Klapdor GmbH, Düsseldorf
- Kö-Bogen, Düsseldorf** (2010 f)
- Thermal building simulation, flow simulation
Architect: Studio Daniel Libeskind, New York
Client: Zechbau GmbH, Erkrath
GFA: 76.000 m²
- Development of ECB-prototypes – Office Building** (2010)
- Green building design, zero energy building
Architect: Lüchinger architects, Rotterdam
Client: Bayer MaterialScience AG, Leverkusen
GFA: 10.000 m²
- Kröpcke Center, Hannover** (2010)
- Thermal building simulation
Architect: Kleihues + Kleihues, Dülmen-Rorup
Client: ISRW Klapdor, Düsseldorf
GFA: 51.500 m²
- Headquarters Schneider, Fronhausen** (2010)
- Energy consulting, thermal building simulation
Architect: Petra Pfau, Steffenberg
Owner: Schneider Immobilien, Steffenberg
GFA: 10.000 m²

- Katschhof, Aachen** (2010)
- Energy consulting, thermal building simulation
Architect: HKS architects, Aachen
Client: Ingenieurgemeinschaft TEN, Aachen
GFA: 4.000 m²
- Ambigon, Munich** (2010)
- Energy consulting, thermal building simulation
Architect: Jürke architects, Munich
Client: Climaplan GmbH, Munich / VIVICO Real Estate, Munich
GFA: 16.500 m²
- Passive House-Office Buildings Bauelemente Linzmeier, Riedlingen** (2010)
- DGNB-Preliminary assessment
Architect: Wahl + Wollmann, Stuttgart
Client: Linzmeier, Riedlingen
GFA: 3.500 m²
- Seat and Skoda, Weiterstadt** (2010)
- Thermal building simulation
Architect: Neumann architects, Frankfurt am Main
Client: Goldbeck Süd, Frankfurt am Main
GFA: 13.000 m²
- Seele, Gersthofen** (2010 f)
- Thermal building simulation, flow simulation
Architect: Prof. Wolfgang Kergaßner, Stuttgart
Client: Lechner, Mönchsdeggingen
GFA: 1.000 m²
- Friedrichstraße 200, Berlin** (2010)
- Calculation of energy requirements before and after the control optimisation
Architect: Philip Johnson, New York
Client: Tishman Speyer, Frankfurt am Main
GFA: 26.000 m²
- LH AirPlus Servicekarten GmbH, Neu-Isenburg** (2010)
- Thermal building simulation, planning of building services, façade planning and sustainability
Architect: Neumann architects, Frankfurt am Main
Client: M.O.O.CON, Frankfurt am Main, AirPlus Neu-Isenburg
GFA: 23.000 m²
- Banque de Luxembourg, Luxemburg** (2010)
- Thermal building simulation
Architect: Arquitectonica International Corp., Luxemburg
Client: Goblet Lavandier & Associés Ingénieurs-Conseils S.A., Luxemburg
GFA: 5.200 m²
- Sparkasse KölnBonn, Friedensplatz, Bonn** (2010)
- Energy consulting, building simulation, PV-Plant, DGNB-Certification in silver
Architect: Ortner + Ortner Baukunst, Berlin
Client: DAL Bautech, Mainz
GFA: 16.000 m²
- Highrise TaunusTurm Frankfurt** (2010)
- Energy Performance Certificate, thermal building simulation
Architect: Gruber + Kleine-Kraneburg, Frankfurt am Main
Client: Tishman Speyer, Frankfurt am Main
GFA: 82.500 m²
- Phoenix Contact DCT-Center, Geb. 35** (2010)
- Thermal building simulation, flow simulation - atrium
Architect: Werner Brandstetter, Bad Pyrmont
Owner: Eisert + Partner, Blomberg
GFA: 29.000 m²
- West Tower, Frankfurt am Main** (2009)
- Energy Performance Certificate, building simulation,
Architect: msm architects, Darmstadt
Client: Strabag Real Estate GmbH
GFA: 26.000 m²



- Casa Stupenda, Düsseldorf** (2009)
- Light simulation, building simulation,
Architect: Renzo Piano Building Workshop, Paris
Client: Bähr Ingenieure, Cologne
GFA: 35.000 m²
- DAL One4Two, Wiesbaden** (2009)
- Energy consulting, building simulation, PV-Plant
Architect: msm architects, Darmstadt
Client: DAL Bautech, Mainz
GFA: 11.000 m²
- Manufactory und Office building Capricorn II, Düsseldorf** (2009)
- Building simulation, flow simulation
Architect: HENN architects, Munich
Client: Trümper Overath Heimann Römer, Bergisch Gladbach
GFA: 24.000 m²
- Patrizia Headquarters, Augsburg** (2008)
- Light simulation, building simulation
Architect: kadawittfeld, Aachen
Client: Trümper Overath Heimann Römer, Bergisch Gladbach
GFA: 6.000 m²
- Tower185 Friedrich Ebert Anlage** (2008)
- Energy Performance Certificate, energy consulting
Architect: Prof. Mäckler, Frankfurt am Main
Client: Vivico Real Estate / Omnicon, Frankfurt am Main
GFA: 130.000 m²
- Skyoffice Tower Zagreb** (2008)
- Energy consulting, building simulation, flow simulation
Architect: Anin Jeromin Fitolidis, Düsseldorf
Client: Anin Jeromin Fitolidis, Düsseldorf
GFA: 69.500 m²
- OpernTurm Frankfurt** (2007)
- Energy Performance Certificate, building simulation
Architect: Prof. Mäckler, Frankfurt am Main
Client: Tishman Speyer, Frankfurt am Main
GFA: 79.000 m²
- Petrom Headquarters, Bukarest** (2007)
- Energy consulting, building simulation, CFD
Architect: Anin Jeromin Fitolidis, Düsseldorf
Client: ISRW Klapdor, Düsseldorf
GFA: 100.000 m²
- E.ON Ruhrgas Headquarters, Essen** (2007)
- Energy concept, building simulation, CFD, light simulation, controlling
Architect: J.S.K architects Düsseldorf
Client: E.ON Ruhrgas, Essen
GFA: 119.000 m²
- Skygarden Arnulf Park Munich** (2007)
- Energy Performance Certificate, building simulation, flow simulation
Architect: Bothe Richter Teherani, Hamburg
Client: Vivico Real Estate, Munich
GFA: 34.000 m²
- Atmos Arnulf Park Munich** (2007)
- Energy Performance Certificate
Architect: KSP Engel und Zimmermann, Munich
Client: Vivico Real Estate, Frankfurt am Main
GFA: 41.000 m²
- Kranhäuser, Cologne** (2006)
- Building simulation, facade simulation
Architect: Bothe Richter Teherani, Hamburg
Client: Bähr Ingenieure, Cologne
GFA: 23.000 m²

- Dominium Cologne** (2005 ff)
- Building simulation, light simulation, energy concept
Architect: Kollhoff, Berlin
Client: HTP Hochtief Projektentwicklung, Cologne
GFA: 25.000 m²
- Fronius Administration, Sattledt** (2005)
- Building simulation
Architect: Benesch & Stögmüller, A-Wels
Client: TB Teubenbacher, A-Wals
GFA: 4.000 m²
- Haus der Forschung, Wien** (2004 ff)
- Building simulation, light simulation, energy concept, PH-project, head of energy planning
Architect: Mascha & Seethaler, Neumann und Partner, Wien
Client: BIG, Wien
GFA: 9.000 m²
- RheinTriadem, Cologne** (2004)
- Building simulation atrium, component cooling and double facade, Energy Performance Certificate
Architect: van den Valentyn, Cologne
Client: Bähr Ingenieure, Cologne, Vivico Real Estate, Cologne
GFA: 40.000 m²
- Austrian Airlines Group AAG Headquarters, Wien Schwechat** (2003 ff)
- Building simulation
Architect: Henke Schreieck, Wien und Holzbauer Wien
Client: AAG, Wien
GFA: 29.000 m²
- Rheinwerk 2, Bonn** (2003)
- Building simulation, double facade and component cooling
Architect: Schommer, Bonn
Client: Bähr Ingenieure, Cologne
GFA: 27.000 m²
- Five Boats, Duisburg** (2003)
- Simulation of office zones
Architect: Grimshaw Partners, London
Client: Graner + Partner, Bergisch Gladbach
GFA: 29.500 m²
- H2Office, Duisburg** (2003)
- Simulation of office zones
Architect: Bothe Richter Teherani, Hamburg
Client: Graner + Partner, Bergisch Gladbach
GFA: 22.500 m²
- ÖBB, Nordbahnstraße 50, Wien** (2003)
- Simulation of expansion and renovation of a Wilhelminian building
Architect: BEHF, Wien
Client: bene consulting, Wien
GFA: 22.000 m²
- Haus Dönhoff, Berlin** (2002)
- Facade simulation, concept for natural ventilation
Architect: Léon Wohlhage Wernik, Berlin
Client: KonTec, Dormagen
GFA: 30.000 m²
- Hanseatic Center, Hamburg** (2002)
- Facade simulation, cooling concept, component cooling
Architect: Bolles Wilson, Münster
Client: Bayerische Hausbau, Hamburg
GFA: 34.500 m²
- Sonninhof, Hamburg** (2002)
- Facade simulation, airflow around the building, highrise concept for natural ventilation
Architect: Kleffel. Köhnholdt und Partner, Hamburg
Client: KonTec, Dormagen
GFA: 50.000 m²



Lycos European Headquarters, Gütersloh (2001)

- Building simulation, flow simulation, light simulation, building physics and optimisation
Architect: Heitmann, Matern, Wäschle, Gütersloh
Client: Heitmann, Matern, Wäschle, Gütersloh
GFA: 60.000 m²

dss, Die Spree Speicher, Berlin (1999)

- Simulation of halls and offices
Architect: Schuwirth, Ermann & Partner, Hannover
Client: intecplan, Düsseldorf
GFA: 18.000 m²

msg, Wiener Neustadt (1999)

- Simulation of Ziegelit-component cooling and heating / cooling walls
Architect: Gruppe cuubuus, Enzesfeld
Client: Gruppe cuubuus, Enzesfeld
GFA: 2.000 m²

Center P.E.C, Düsseldorf (1999)

- Simulation, climatic concept
Architect: Wansleben, Düsseldorf und Coenen, Maastricht
Client: bsk coplan, Bergisch Gladbach
GFA: 7.000 m²

Athlon Place City West, Frankfurt/Main (1998)

- Energy concept, tariff consulting
Architect: Braun und Schlockermann & Köhler, Frankfurt a.M.
Client: Saphira Immobilien- und Projektentwicklung, Munich
GFA: 32.000 m²

Kaufhof AG Headquarters in Cologne (1995)

- Simulation, energy concept
Owner: Kaufhof Holding AG, Zentra AG
Architect: Eugen Schattevoy, Bonn
GFA: 15.000 m²

Settlements and Residential Buildings:

Holzhalbinsel, Rostock (2015)

- Thermal building simulation, heating demand, dynamic heating load
Architect: nps tchopan voss, hamburg
Client: WIRO GmbH, Rostock
GFA: 22.000 m²

+++ House, Prototype (2015)

- Development of a prototype, simulation of an air collector
Architect: ACMS, Wuppertal
Client: ACMS, Wuppertal
GFA: 116 m²

Loft Tulpengasse 2 (Wien) (2014)

- Building physics and thermal renovation and energy concept within monument protection
Owner: Marco Lukesch Projektentwicklung Gesellschaft MBH
Architect: BWM architects und Partner
GFA: 3.500 m²

Residential Buildings Wolfersberggasse; Wien (2014)

- Building physics, thermal renovation concept
Owner: Stadt Wien – Wiener Wohnen
Architect: Studio BERNER.STOLZ architects ZT-OG
GFA: 6.800 m²

Urban Development Area (Residential and Office) Viertel Zwei Plus, Wien (2014)

- Energy concept, masterplanning of building services
Owner: IC-Projektentwicklung GmbH, Wien
Client: IC-Projektentwicklung GmbH, Wien
GFA: 192.000 m²

- Residence of the Austrian Ambassador, Athen** (2014)
- Renovation concept
Architect: buerger katsota architects, Athen
Owner: Außenministerium Österreich
Client: Außenministerium Österreich
GFA: 550 m²
- Residential Building Geisbergstraße 9-6, Berlin** (2013)
- DGNB-Certification
Architect: Ortner + Ortner, Berlin
Client: Ortner + Ortner, Berlin
GFA: 20.000 m²
- Residential Buildings „Breite Furt“, Wien** (2013)
- Energy Concept
Client: Energiecomfort Energie- und Gebäudemanagement, Wien
GFA: 81.000 m²
- Residential Buildings Raxstraße, Wien** (2013)
- Study: Heat recovery of decentralized exhaust air systems
Client: Kallco Development, Wien
GFA: 10.700 m²
- Innovation City Plus Energy House GBB, Bottrop** (2013)
- Energy concept, building physics
Architect: Strelzig + Klump architects, Bottrop
Client: Gesellschaft für Bauen und Wohnen Bottrop mbH, Bottrop
- Klostergärten, Stadtvillen, Cologne** (2013)
- Dynamic building simulation (4 flats)
Architect: Molestina architects, Cologne-Madrid
Owner: Pandion Real Estate GmbH, Cologne
Client: Graner + Partner, Bergisch Gladbach
GFA: 46.000 m²
- Belsenpark, Residential Buildings WA 2 and WA 3, Düsseldorf** (2012 f)
- Thermal building simulation, flow simulation
Architect: PLANQUADRAT, Darmstadt / landau + kindelbacher, Munich
Owner: PATRIZIA GmbH, Luxemburg
GFA: 14.500 m²
- Q3 Palais an den Höfen, Frankfurt** (2012)
- Dynamic building simulation
Architect: B & V architects GmbH, Frankfurt am Main
Client: PDI Frankfurt Q3 Ost/West, Düsseldorf
GFA: 20.600 m²
- Sonnwendviertel, Vienna** (2012)
- Special issues of building physics, concept development
Architect: Klaus Kada; Graz, RIEPL RIEPL; Linz, Vlay + Streeruwitz; Wien
Client: win4wien, Mischek GmbH, Wien
- „Mitten im 11.“ New residential Buildings, Vienna** (2012)
- Special issues of building physics, concept development
Architect: Rüdiger Lainer + Partner, Wien
Client: Gebös, Trumau, Mischek GmbH, Wien
- EUROPAN Emil-Behring-Weg, Vienna** (2011)
- Consulting and controlling within energy efficiency and sustainability in urban development
Architect: ArenasBasabe, Madrid und Mascha & Seethaler, Wien
Client: BIG Entwicklungs- und Verwertungs-GesmbH, Wien
- IBA water houses – Wohnen am Inselpark, Hamburg** (2011f)
- DGNB-Rating, shading simulation, solar analyzing
Architect: Schenk + Waiblinger, Hamburg
Client: ISRW Klapdor, Berlin
GFA: 5.000 m²
- Elbtorquartier Hafencity, Hamburg** (2010)
- Thermal building simulation Atrium Greenpeace
Architect: Bob Gysin + Partner BGP, Zürich
Client: ISRW Klapdor, Düsseldorf
GFA: 10.000 m²



- 50 solar settlements in NRW, Blumenhof Eitorf** (2010)
- Shading simulation, solar analysis
Client: Gemeinde Eitorf
- Kranhaus Residence, Cologne** (2007)
- Building simulation, facade simulation
Architect: Bothe Richter Teherani, Hamburg
Client: Bähr Ingenieure, Cologne
GFA: 27.000 m²
- Passive House Estate Purkersdorf** (2005ff)
- Building simulation, energy supply concept, Energy Performance Certificates (15 HU)
Architect: Reinberg, Wien
Client: Reinberg, Wien
- Passive House Estate Am Leimbacher Berg, Leverkusen** (2003ff)
- Sun analysis, energy supply concept, CO₂-Balance, thermal bridges (47 HU)
Architect: tr architects, Cologne/Bielefeld
Client: GeWoGe, Leverkusen
- Loft Conversion Wollzeile, Wien** (2003)
- Energy concept, spring water cooling, conservatory, heat pump
Architect: G.W. Reinberg, Wien
Client: Eheleute Soulier, Wien
- Solar Settlement Bergisch Gladbach** (2003)
- Sun analysis, pellet concept, CO₂-Balance (27 HU)
Architect: Prof. Wirtz, Cologne
Client: Familia Baugesellschaft, Cologne
- Gatzweiler-Gelände, Düsseldorf** (2002)
- Simulation of exposure and tanning (B-Plan)
Architect: HPP, Düsseldorf
Client: Graner und Partner, Bergisch Gladbach
- Dom-Karree (Tacitus Carree), Cologne-Bayental** (2002)
- Simulation of exposure and tanning (250 HU)
Architect: Prof. Coersmeier, Cologne
Client: Graner und Partner, Bergisch Gladbach
GFA: 24.000 m²
- Falkenried Lichthaus, Hamburg** (2002)
- Facade simulation
Architect: Baumschlager und Eberle, Lochau
Client: Bayerische Hausbau, Hamburg
- Settlement Güterbahnhof Schalke-Süd, Gelsenkirchen** (2000)
- Simulation of solar potentials (300 HU)
Client: Burgmer GmbH, Gelsenkirchen
- Solar Settlement Westlich Reckfeldstraße, Gelsenkirchen** (2000)
- Simulation, energy and building services concept (30 HU)
Client: Stadt Gelsenkirchen
- Solar City, Linz** (2000)
- Simulation, energy concept, study for facade
Architect: Foster and Partners, London / Berlin
Client: Neue Heimat, Linz
- Solar Settlement Rittersdorf** (1999)
- Energy and building services concept, local heating, solar and biomass heating
Architect: diverse
Client: Ingenieurbüro bau.werk, Kaiserslautern
- Residential and Commercial Park Vogelsmühle, Radevormwald** (1998)
- Energy concept and preliminary planning of heating and electric supply, tariff consulting
Client: Kiefer und Zehner Immobilien, Cologne
- Pilot Project 5-litre-houses, Wittlich** (1998)
- Energy and building services concept (individual for every building)
Architect: diverse
Client: Ingenieurbüro bau.werk, Kaiserslautern

Pilot Project Sonnenhäuser Terenten, Südtirol (1997)

- Preliminary planning, variant comparisons
Owner: Institut für Wohnungsbau, Bozen
Architect: Egger und Aichner / Griesser, Bozen

Residential Building Sagedergasse in Wien (1996)

- Energetic optimisation, L-EWT underground channel, conservatories
Architect: G.W. Reinberg, Wien

Banks and Insurance Companies:

Sparkasse Mönchengladbach (2014)

- Thermal building simulation, flow simulation, planning services
Owner: Sparkasse Mönchengladbach
Client: Bähr Ingenieure, Cologne

Zentrale Sparkasse Rotenburg-Bremervörde, Zeven (2014)

- Energy concept, thermal building simulation, EnEV-Consulting
- Green-Building Zertifizierung
Architect: bkp kolde kollegen, Düsseldorf
Owner: Sparkasse Rotenburg-Bremervörde, Zeven
Client: DAL Bautech, Mainz
GFA: 8.000 m²

Sparkasse, Gnarrenburg (2014)

- Energy concept, thermal building simulation, EnEV-Consulting
Architect: Stelling, Gnarrenburg
Owner: Sparkasse Rotenburg-Bremervörde, Zeven
Client: DAL Bautech, Mainz
GFA: 900 m²

Sparkasse Kempten Headquarters (2013)

- Energy consulting, simulations, DGNB-Certification, ecological building simulation, life cycle costs (LCC), life cycle assessment (LCA)
Architect: Auer + Weber + Assoziierte, Stuttgart
Client: DAL Bautech, Mainz
GFA: 9.000 m²

Atrium Building Sparkasse, Krefeld (2010)

- Quality assurance, facade and building services planning, initial advice
Architect: Contor Müller Schlüter, Wuppertal
Client: Contor Müller Schlüter, Wuppertal
GFA: 16.500 m²

Kreissparkasse, Groß-Gerau (2010)

- Energy consulting, thermal building simulation, expert opinion within energy, technology, fire protection
Architect: Z+M Zaeske + Partner, Wiesbaden
Client: DAL Bautech, Mainz
GFA: 11.000 m²

Administration Sparkasse KölnBonn, Friedensplatz, Bonn (2010)

- Energy consulting, simulations, ecological building advice, life cycle costs (LCC), life cycle assessment (LCA), DGNB-Certification in silver
Architect: Ortner + Ortner Baukunst, Berlin
Client: DAL Bautech, Mainz
GFA: 16.000 m²

Kreissparkasse Heinsberg, Headquarters Erkelenz (2010)

- Energy consulting, thermal building simulation, flow simulation
Architect: Wolfgang Emondts, Hückelhoven
Client: Kreissparkasse Heinsberg
GFA: 13.000 m²

EIB European Investment Bank, Luxemburg (2010)

Daylight simulation
Architect: Ingenhoven, Düsseldorf
Client: M.O.O.CON GmbH, Wien
GFA: 70.000 m²



DEG-Bank, Cologne

- Energy concept
- Building simulation
- Light simulation
- Flow simulation
- Tariff consulting, tender for green electricity
Architect: J.S.K architects, Düsseldorf
Client: J.S.K International, Frankfurt am Main
GFA: 23.000 m²

(2005 f)

Finanzinformatik / Sparkassen Informatik, Frankfurt

- Building simulation, facade simulation, double facade, heated facade, flow simulation, glass hall
Architect: MOW, Frankfurt
Client: Castra, Mainz
GFA: 23.000 m²

(2003 f)

Unfallkasse Hessen, Frankfurt

- building simulation, optimisation, component cooling, decentralised ventilation, air boxes, flow experiment in a wind tunnel
Architect: Braun und Voigt, Frankfurt
Client: Unfallkasse Hessen, Frankfurt
GFA: 9.500 m²

(2003)

Commerzbank, Aachen

- Simulation, energy concept
Client: TEN, Aachen

(2000)

Stadtparkasse Münster

- Facades, energy concept
Architect: Prof. Baumewerd, Münster
Client: Graner + Partner, Bergisch Gladbach

(1998)

Headquarters of Zagrebacka Banka in Zagreb

- Energy concept, concept of heating, climatic and cooling systems
Client: Braun und Schlockermann & Köhler, Frankfurt a.M.

(1998)

Commerzbank Prag

- Cooling load and heat requirement calculation, optimisation of the customer center
Client: bsk engineering, Bergisch Gladbach

(1994)

Gothaer Versicherungsbank Cologne

- Dimensioning of a CHP, simulation of heat requirement and indoor climate
Architect: PPP architects, Cologne
Client: Arge Gebäudetechnik KILOS, Cologne
GFA: 59.000 m²

(1994)

Headquarters of Provinzialversicherung Münster

- Concept evaluation and optimisation of plant technology
Owner: Provinzialversicherung Münster
Client: Ingenieurgesellschaft TEN, Aachen
GFA: 7.800 m²

(1994 ff)

Department Stores and Shopping Centers:

- IKEA Sustainable Store, Neuss-Kaarst** (2014)
- BREEAM-Certification, thermal building simulation, building physics
Architect: HenningLarsen Architects, Munich
Client: IKEA Verwaltungs-GmbH, Wallau
GFA: 40.000 m²
- Glacis-Galerie, Neu-Ulm** (2013)
- DGNB-Certification, thermal building simulation, ecological building consulting, life cycle costs (LCC), life cycle assessment (LCA)
Architect: nps tchoban voss architects, Hamburg
Owner: OFB & Procom Objekt Neu-Ulm GmbH & Co. KG, Hamburg
Client: K6 architects, Düsseldorf
GFA: 81.000 m²
- Metro Energy Future Store, Namur** (2013)
- Energy design
Client: Bayer MaterialScience AG, Leverkusen
GFA: 1.700 m²
- Mönchengladbach Arcaden** (2012)
- Thermal building simulation, daylight simulation
Architect: Heine architects, Hamburg
Client: mfi GmbH, Essen
GFA: 81.000 m²
- Paunsdorf Center, Leipzig** (2011)
- Thermal building simulation, flow simulation
Architect: Hütténes GmbH, Mülheim an der Ruhr
Client: mfi AG, Essen
GFA: 85.000 m²
- IKEA Store, Hamburg-Altona** (2010)
- Expert opinion within Green Building Design, energy consulting, DGNB-Certification
Architect: DINSE FEEST ZURL architects, Hamburg
Client: IKEA Verwaltungs- GmbH, Hofheim-Wallau
GFA: 73.000 m²
- DM warehouse Wernau** (2010)
- Energy consulting, thermal building simulation
Architect: rhp rossa heppeler & partner architects, Wendlingen
Client: GERTEC GmbH, Essen
- FORUM Duisburg** (2005 ff)
- Simulation, flow analysing, comfort analysis
Architect: Chapman Taylor, Düsseldorf, Ortner + Ortner, Berlin
Client: Winter Ingenieure, Düsseldorf
GFA: 55.000 m²
- Sieg-Carré, Siegen** (2003 ff)
- Simulation, optimisation, component cooling, double facade
Architect: Kahlen Oestereich Rappaport, Aachen
Client: Sparkasse Siegen, Siegen
GFA: 26.000 m²
- City-Project, Münster Arkaden** (2002)
- Building and flow simulation
Architect: Kleihues + Kleihues, Dülmen-Rorup
Client: Assmann Beraten und Planen, Münster
GFA: 58.000 m²
- Fogliarini Show Room, San Remo** (2002)
- Simulation, bioclimatic cooling
Architect: J. M. Schivo, Rom
Client: J. M. Schivo, Rom
- Würth + Hochenburger, Innsbruck** (2000)
- Simulation of glass halls, sales areas and offices
Architect: ATP, Wien
Client: Gruppe cuubuu, Enzesfeld



Bellaflora Blumenmärkte

- Simulation of glasshouses with underground pipes
Architect: Baumeister Schmelz, Wösendorf
Client: Bellaflora, Wien

(2000)

Weltstadthaus Peek & Cloppenburg, Cologne

- Simulation, CFD, energy concept, facade studies
Architect: Renzo Piano Building Workshop, Paris
Client: HochTief, Niederlassung Rheinland, Cologne
GFA: 23.000 m²

(1999 ff)

Stilwerk Düsseldorf

- Simulation of the atrium, rating of offices and shops
Architect: J.S.K, Düsseldorf
Client: Graner + Partner, Bergisch Gladbach
GFA: 51.500 m²

(1998)

Entertainment and Culture:

Golfresort Haugschlag

- Building physics, energy concept
Client: BauConsult real estate projectmanagement GmbH
GFA: 4.100 m²

(2014/15)

KKM Kraftwerk Mitte, Staatsoperette und Theatergebäude, Dresden

- 3D-flow Simulation
Architect: PFP Planungs GmbH, Hamburg
Owner: Kommunale Immobilien Dresden, Dresden
Client: ISRW Klapdor, Düsseldorf
GFA: 30.200 m²

(2014)

Music School of Velden

- Building physics, thermal renovation concept within monument protection
Owner: Marktgemeinde Velden am Wörther See
Architect: ARCH+MORE Ziviltechniker GmbH
GFA: 830 m²

(2014)

Weltmuseum, Wien

- Energy concept, building physics, conceptual planning of building services
Owner: Kunsthistorisches Museum, Wien
Client: Kunsthistorisches Museum, Wien

(2014)

Hildesheimer Dom

- Thermal building simulation
Architect: Schilling architects, Cologne
Client: ISRW Klapdor GmbH, Düsseldorf

(2012)

Islamic Cultural Centre, Cologne

- Thermal building simulation
Architect: Paul Böhm, Cologne
Client: ISRW Klapdor GmbH, Düsseldorf
GFA: 18.000 m²

(2011)

Montforthaus Feldkirch

- Green Building Design, thermal building simulation, building physics, energy consulting
Architect: Hascher Jehle, Berlin, Mitiska Wäger, Bludenz
Owner: Stadt Feldkirch, Österreich
GFA: 12.484 m²

(2010)

Folkwangschule Essen

- Energy concept, building and flow simulation
Client: Graner + Partner, Bergisch Gladbach

(2005)

Tourist Centre Eggenburg

- Energy concept, building simulation, head of energy planning
Architect: Reinberg, Wien
Client: Reinberg, Wien

(2003)

Space Park / Waterfront Bremen (2000)

- Simulation of building physics and building services, glazing concept, ventilation system
Architect: RKW, Düsseldorf
Client: Winter Ingenieure, Düsseldorf
GFA: 206.000 m²

Central Stadium, Leipzig (2000)

- Energy concept for usage of geothermal energy and 100 kW PV-Plant
Architect: Arge Zentralstadion
Client: Stadt Leipzig, Hochbauamt

Zentrum Kapuzinergraben, Aachen (1999)

- Simulation of the ensemble of cinema, casino and existing buildings
Architect: Ingenhoven, Overdiek und Partner, Düsseldorf
Client: Intecplan, Düsseldorf

Kultur- und Medienzentrum, Bergheim (1999)

- Building and building services simulation
Architect: Zander, Aachen und Busmann + Haberer, Cologne
Client: Ingenieurgemeinschaft TEN, Aachen

Theater Am Brühl, Erfurt (1999)

- Simulation of a double facade
Architect: Prof. Friedrich, Hamburg
Client: Graner + Partner, Bergisch Gladbach
GFA: 25.000 m²

Rautenstrauch Joest Museum, Cologne (1997)

- Cooling load simulation and optimisation in the preliminary planning
Architect: Schneider und Sendelbach, Braunschweig
Owner: Stadt Cologne
GFA: 23.500 m²

LancessArena / KölnArena (1996)

- Simulation and building physics, optimization of building services
- Tariff consulting and energy management consulting
Architect: Architekturbüro Böhm, Cologne
Client 1: Phillip Holzmann AG, Cologne
Client 2: Kölnarena Management GmbH, Cologne

Arena CentrO Oberhausen (1995)

- Determination of heat requirement, as well as cooling load simulation
Architect: DL + A / Ellerbe Becket, Minneapolis
Client: Krantz TKT, Bergisch Gladbach

Archive and Storage:

Full-Range Warehouse REWE, Koblenz (2015)

- Development of an energy concept, EnEV, energy consulting, building physics, simulation, DGNB
Client: Rewe Group, Cologne
GFA: 65.000 m²

Archive Kulturzentrum, Zons (2014)

- Simulation of a natural conditioning system
Client: ISRW Klapdor, Düsseldorf
GFA: 1.500 m²

Collection and Research Center, Hall in Tirol (2014)

- Energy concept, building physics, conceptive planning of building services
Architect: franz ZT GmbH, Wien
Owner: Land Tirol
Client: franz ZT GmbH, Wien
GFA: 14.500 m²

Library Kloster Maria Laach (2012)

- Thermal building simulation
Architect: Hans-Josef Scheer, Wassenach
Client: Graner + Partner, Bergisch Gladbach



- Central Library Philipps-Universität, Marburg** (2010)
- Thermal building simulation
Architect: Sinning architects, Darmstadt
Client: ISRW Klapdor, Düsseldorf
GFA: 28.500 m²
- Hessisches Hauptstaatsarchiv, Wiesbaden** (2010)
- Energy and CO₂ reduction concept
Client: Hessisches Baumanagement, Wiesbaden
- Depot Ruhr-Museum Zollverein, Essen** (2008)
- Simulation of a natural conditioning system
Architect: Ahlbrecht + Scheidt, Essen
Client: Graner + Partner, Bergisch Gladbach
GFA: 2.000 m²
- Museum König, Bonn** (2008)
- Simulation of the atrium
Client: Graner + Partner, Bergisch Gladbach
- Haus der Essener Geschichte** (2004)
- Simulation of a natural conditioning system
Architect: Ahlbrecht Felix Scheidt, Essen
Client: Graner + Partner, Bergisch Gladbach
GFA: 5.500 m²
- Diözesanbibliothek Bischöfliches Generalvikariat, Münster** (2004)
- Simulation of a natural conditioning system, great hall, Santini-Collection and stacks
Architect: Max Dudler, Berlin
Client: Graner + Partner, Bergisch Gladbach
GFA: 14.500 m²
- Austrian National Library BMUKA Hofburg, Wien** (2002)
- Simulation of a natural conditioning system
Architect: Lindner, Baden/Wien
Client: Burghauptmannschaft Österreich, Wien
- LVR-Archive Abtei Brauweiler** (2000)
- Simulation of a natural conditioning system
Architect: Prof. Schneider-Wessling, Cologne
Client: Graner + Partner, Bergisch Gladbach
GFA: 3.000 m²
- Federal State Archives Münster** (1999)
- Simulation of a natural conditioning system
Architect: Schoeps & Schlüter, Münster
Client: Graner + Partner, Bergisch Gladbach
- Depot Westfälisches Freilichtmuseum Detmold** (1998)
- Simulation of a natural conditioning system
Client: Graner + Partner, Bergisch Gladbach
- Westfälisches Archivamt Münster** (1997)
- Simulation of a natural conditioning system
Client: Graner + Partner, Bergisch Gladbach
- REWE Frischezentren Berlin, Buttenheim, Munich-Eitting, Cologne-Langel** (1995 ff)
- Optimisation of building services and building physics of refrigerated and frozen warehouses
Client: Plan und Grund, Cologne
Owner: REWE Zentral AG
- Central Depot Kaufhof AG in Frechen** (1995)
- Optimisation of the ventilation concept and building services
Client: Kaufhof Holding, Cologne

Social and Public Buildings:

- Elder people's home, Clervaux, Luxemburg** (2015)
- Thermal building simulation, summer heat protection
Architect: Goblet Lavandier & Associés Ingénieurs-Conseils S.A., Luxemburg
Client: Goblet Lavandier & Associés Ingénieurs-Conseils S.A., Luxemburg

- Kirchenkreiszentrum, Hamburg** (2015)
- EnEV, energy consulting, building physics, simulation
Architect: me di um architects, Hamburg
Client: EvaBau, Hamburg
GFA: 6.400 m²
- Post Luxembourg, Atrium, Luxembourg** (2014)
- Expert opinion of thermal building simulation within the DGNB criteria SOC1.1
Architect: Goblet, Lavandier & Associés, Luxembourg
Client: Goblet, Lavandier & Associés, Luxembourg
- Renovation and conversion Alanbrooke Kaserne, Paderborn** (2014)
- 3D-daylight simulation
Architect: Klaus Beck, Bielefeld
Client: Stadt Paderborn, Paderborn
GFA: 26.500 m²
- Sekundarschule Drolshagen** (2014)
- Energy consulting, building physics, thermal building simulation, EnEV
Architect: tr.architects, Cologne
Client: Stadt Drolshagen, Drolshagen
GFA: 1.560 m²
- Renovation of Mensa Würzburg (Julius-Maximilian-Universität), Würzburg** (2014)
- Energy consulting, thermal building simulation, EnEV, building physics
Architect: pbr Rohling AG, Frankfurt
Client: Staatliches Bauamt, Würzburg
- Austrian Embassy Bangkok, Bangkok** (2014)
- Energy concept, building physics, conceptive planning of building services
Architect: holodeck architects, Wien
Owner: Außenministerium Österreich
Client: Außenministerium Österreich
GFA: 1.060 m²
- Austrian Embassy Mexiko, Mexiko-City** (2014)
- Renovation concept
Architect: Bernhard Rehn, Gleisdorf, Österreich
Owner: Außenministerium Österreich
Client: Außenministerium Österreich
GFA: 550 m²
- Krankenpflegeschule „Wilhelminenspital“, Wien** (2013)
- Thermal building simulation
Architect: kub a Karl und Bremhorst architects, Wien
Client: Schöberl & Pöll, Wien
GFA: 9.500 m²
- Administration Building City of Düsseldorf, Düsseldorf** (2013)
- Dynamic building simulation
Architect: sander.hofrichter architects, Ludwigshafen/Düsseldorf
Client: sander.hofrichter architects, Ludwigshafen/Düsseldorf
- NEW Blauhaus, Mönchengladbach** (2013)
- Simulations, energy consulting
Architect: kadawittfeldarchitektur, Aachen
Owner: NEW mobil und aktiv GmbH, Mönchengladbach
Client: A. Frauenrath Bauconcept, Heinsberg
GFA: 5.400,00 m²
- GIRA Betriebskindertagesstätte, Radevormwald** (2013)
- DGNB-preliminary assessment
Architect: Figge architects, Wuppertal
Client: GIRA Giersiepen, Radevormwald
GFA: 670 m²
- Extension of Universität für Angewandte Kunst, Wien** (2012)
- Flow simulation
Architect: Arch. Tschapeller, Wien
Client: Planungsgruppe Grünbichler, Graz

- Residential Home Olympisches Dorf, Innsbruck** (2012)
- Thermal building simulation
Architect: ARTEC, Wien
Client: Alpsolar Klimadesign OG, Innsbruck
GFA: 10.500 m²
- Passive House High School, Demmin** (2012)
- Determination of an expert opinion within PHPP, energy consulting
Architect: buttler architects, Rostock
Client: Hansestadt Demmin
GFA: 2.500 m²
- Kreishaus Paderborn** (2012)
- Calculation of energy requirement PHPP, thermal building simulation
Architect: Matern und Wäschle, Paderborn
Client: Kreis Paderborn
GFA: 850 m²
- Feuerwehr Poppendorf** (2012)
- Energetic analysis and evaluation, thermal building simulation
Architect: buttler architects, Rostock
Client: Gemeinde Poppendorf
GFA: 1.200 m²
- KITA Beiersdorf AG, Hamburg** (2012)
- Thermal building simulation, daylight simulation
Architect: Kadawittfeld, Aachen
Client: THOR, Bergisch-Gladbach
GFA: 1.500 m²
- KITA St. Hubertus, Cologne** (2012)
- Expert opinion of energy consulting
Architect: Rosiny + Kierdorf, Cologne
Client: CARITAS, Cologne
- Sprengel Museum, Hannover** (2011)
- Thermal building simulation of the whole building, CFD, optimisation and controlling
Architect: Marcel Meili, Markus Peter, Zürich
Owner: Gebäudemanagement, Stadt Hannover
GFA: 6.500 m²
- Sportlycée, Luxemburg** (2011)
- Thermal building simulation
Client: Kleusberg, Wissen
- Athénée, Luxemburg** (2011)
- Thermal building simulation
Architect: Bruck + Weckerle, Luxemburg
Client: Kleusberg, Wissen
- Extension of St. Vincenz-Krankenhaus, Paderborn** (2011)
- Thermal building simulation
Architect: Breithaupt architects, Salzkotten
Client: St. Vincenz-Krankenhaus, Paderborn
- Extension Humboldt Gymnasium and Kammermusiksaal, Cologne** (2011)
- Thermal building simulation
Architect: Numrich Albrecht Klumpp, Berlin
Client: Graner + Partner, Bergisch Gladbach
GFA: 5.500 m²
- IBB Johannes Rau „Zukunftswerkstatt“, Minsk** (2010)
- Energy consulting and building simulation
Architect: Dipl.-Ing. Klaus Beck, Bielefeld
Client: IBB Internationales Bildungs- und Begegnungswerk gGmbH, Dortmund
GFA: 1.500 m²
- Kindergarten, Leverkusen** (2010)
- Thermal building simulation, expert opinion to Green Building Design, energy consulting
Architect: tr. architects, Cologne
Client: Bayer Real Estate GmbH, Leverkusen
GFA: 3.000 m²

- Batiment Administrativ, Luxemburg** (2010)
- Thermal building simulation
Architect: Bruck + Weckerle, Luxemburg
Client: EKOpian S.A., Steinheim, Luxemburg
- UN Campus, Bonn** (2010)
- Building simulation
Architect: Behnisch & Partner, Stuttgart
Client: Beratende Ingenieure Winter, Düsseldorf
GFA: 22.500 m²
- Extension of Klinikum „Barmherzige Brüder“, Tier** (2010)
- Building simulation – investigation of the thermal comfort in a generic patient room
Architect: Joachim Schneider, Bitburg
Client: Kleusberg, Kabelsketal
- Berufsschule Beethovenstraße, Solingen** (2010)
- Building simulation
Architect: tr. architects, Cologne
Owner: Stadt Solingen
GFA: 7.800 m²
- Dürer Gymnasium, Nürnberg** (2010)
- Building simulation, flow simulation 3-field sports hall and 1 classroom
Architect: BaurConsult, Hassfurt
Client: bau.werk, Kaiserslautern
GFA: 3.500 m²
- Mensa Reismann + Pelizaeus Gymnasium, Paderborn** (2010)
- Energy consulting, building simulation, Energy Performance Certificate
Architect: Matern und Wäschle, Paderborn
Client: GMP Gebäudemanagement Paderborn, Paderborn
- Zentrum für Entwicklung und Diakonie e.V., Berlin** (2010)
- Energy consulting
Concept: KSV Krüger Schubert Vandreike GmbH, Berlin
Client: Vivico Real Estate GmbH, Berlin
GFA: 23.000 m²
- Attert-Lycée à Redange/Attert, Luxemburg** (2010)
- Building simulation, flow simulation, daylight simulation
Client: Ministère des Travaux Publics, Administration des bâtiments publics, Luxemburg
- CO2 neutral Kindergarden of Bayer Crop Science** (2009)
- Energy Concept, PHPP, simulation, PV-Plant, geothermal energy
Architect: tr. architects, Cologne
Client: Bayer Real Estate GmbH, Leverkusen
GFA: 1.500 m²
- Nils-Stensen High School, Hamburg** (2009)
- Passive house school, energy concept, PHPP, simulation
Architect: me.di.um, Hamburg
Client: Katholischer Schulverband Hamburg
GFA: 12.000 m²
- Post Luxembourg, Atrium, Luxembourg** (2014)
- Expert opinion of thermal building simulation within the DGNB criteria SOC1.1
Architect: Goblet, Lavandier & Associés, Luxembourg
Client: Goblet, Lavandier & Associés, Luxembourg
- CO2-neutral PLUS-Energy Kindergarten Wustrow** (2008 f)
- Energetic analysis, evaluation
Architect: Buttler architects, Rostock
Client: Gemeinde Ostseebad Wustrow
GFA: 1.162 m²
- Kreishaus Siegen** (2006 f)
- Facade simulation, reference room simulation, building simulation for the renovation, concept for natural ventilation
Architect: GMP, Aachen
Client: Kreis Siegen-Wittgenstein
GFA: 23.000 m²



- Stadtwerke Düsseldorf** (2006)
- Building simulation and Energy Performance Certificate, Höher Weg 100
Architect: Ingenhoven, Düsseldorf
Client: Stadtwerke Düsseldorf
GFA: 27.500 m²
- Kunsthalle Emden** (2006)
- Building simulation of the modernization / atrium
Architect: Spengelin, Hannover
Client: ISRW Klapdor, Düsseldorf
- Town hall, Aschaffenburg** (2005 f)
- Building simulation
Architect: Werner Haase, Karlstadt
Client: Werner Haase, Karlstadt
GFA: 9.000 m²
- Service Centre Remscheid** (2004)
- Simulation, atrium, double facade
Architect: Arns + Partner, Remscheid
Client: Graner + Partner, Bergisch Gladbach
GFA: 13.500 m²
- Departure Lounge M, Cologne/Bonn Airport** (2003)
- Simulation, atrium, thermal layering, floor cooling, displacement ventilation
Architect: Murphy Jahn, Chicago
Client: Bähr Ingenieure, Cologne
GFA: 70.000 m²
- Extension of Bundesamt für Naturschutz, Bonn** (2003)
- Simulation, activation of capillary components, geothermal energy
Architect: AIT Thillmann, Koblenz
Client: Prof. W. Hinz - Dipl. Ing. G. Schwarz, Cologne
- Commemorative sculpture for the Jewish victims of Nazism, Mannheim** (2003)
- Simulation of a glass cube, surface temperatures
Architect: Professor Helmut Striffler, Mannheim
Client: Jochen Kitzbühler, Riegel
- Helios Kliniken, Berlin Buch** (2002)
- Simulation of atria and underground channels
Client: Graner + Partner, Bergisch Gladbach
GFA: 96.000 m²
- Schools of Gebäudewirtschaft Stadt Cologne** (2000)
- Energy concepts and integration of solar heating for school pools, potential study
Client: Gebäudewirtschaft der Stadt Cologne
- Kreiskrankenhaus Stollberg** (1999)
- daylight simulation
Architect: Thiede, Messthaler und Keitel, Leipzig
Client: Graner + Partner, Bergisch Gladbach
- Klinikum Darmstadt** (1999 und 2002)
- Simulation of a double facade
Architect: Prof. Friedrich, Hamburg
Client: Bauabteilung Klinikum Darmstadt
GFA: 23.000 m²
- An den Dominikanern, Cologne** (1997)
- Lighting study
Owner: RENTACO, Cologne
Client: Graner + Partner, Bergisch Gladbach
Architect: Jöhnssen, Ranft, Lüke, Cologne / Hermann & Valentiny, Luxemburg
- Neue Messe Munich, Kongresszentren, Bankettsaal** (1997)
- Simulation and optimisation, floor cooling
Client: Krantz-TKT
Architect: Bystrup, Bregenhøj & Partner, Munich
GFA: 2.000 m²

West Wing of Hochschule für Gestaltung in Offenbach/Main (1996)

- Simulation, energy concept
Client: Staatsbauamt Friedberg (Hessen)
Architect: Reuter & Werr, Frankfurt
GFA: 1.800 m²

District Town Hall Cologne - Mülheim (1996)

- Simulation, ventilation concept
Client: IGH, Cologne
Architect: Kister, Scheithauer und Partner, Cologne
GFA: 20.000 m²

Ecological City Center Auferstehungskirche, Berlin (1995)

- Planning concept of all ecological parameters, building simulation
Owner: Kirchbauhof, Berlin
Architect: Büro Voigtländer, Bergisch Gladbach
GFA: 500 m²

New Athens International Airport (1995)

-Simulation of the main terminal, optimisation
Client: Krantz TKT, Bergisch Gladbach
Architect: JSK architects Frankfurt
GFA: 160.000 m²

Special Constructions:

New Campus Frankfurt School of Finance and Management, Frankfurt (2015)

- Dynamic building simulation, atrium and reference areas
Architect: Henning Larsen, Munich
Client: Caverion, Deggendorf
GFA: 42.000 m²

Viktoriakarree, Bonn (2015)

- Expertise of competition entries EnEV calculations
Client: Bundesstadt Bonn
GFA: zw. 16.500 – 41.200 m²

Eislaufverein Wien (2014/15)

-Energy concept, climate-engineering
Owner:
Client: Architektur Consult ZT GmbH
GFA: 80.000m² (Büro, Wohnen, Hotel, Sport)

Climbing Hall Innsbruck (2014/15)

- Thermal building simulation, flow simulation
Client: Innsbrucker Immobilien GmbH & Co KG
GFA: 2.000 m²

Bonner Nordfeld, Bonn (2014)

- Expertise of 5 competition entries with EnEV calculations
Client: Bundesstadt Bonn
GFA: zw. 15.000 – 29.100 m²

Kraftwerk 4 Geb. UHA, UHF, UTH, UHQ, Datteln (2014)

- 3D-flow simulation
Planner: E.ON New Build & Technology GmbH, Gelsenkirchen
Owner: E.ON Kraftwerke, Hannover
Client: Kraftanlagen Munich GmbH, Munich
Client: Caverion Deutschland GmbH, Cologne

Extension of MAKINO industrial building, Kirchheim u. Teck (2014)

- EnEV
Architect: Gewerbebau Schumacher & Partner GmbH, Birkenfeld
Client: MAKINO GmbH, Kirchheim u. Teck

Amprion, Brauweiler (2014)

- Thermal building simulation, flow simulation
Architect: Kaspar Krämer, Cologne
Client: Bähr Ingenieure, Cologne
GFA: 7.000 m²



- Technologie und Gründerzentrum (TGZ), Würzburg** (2014)
- Thermal building simulation
Architect: Kister Scheithauer Groß, Leipzig
Client: Technologie – und Gründerzentrum GmbH (TGZ), Würzburg
GFA: 5.100 m²
- Feuerwache, Alzey** (2014)
- EnEV-calculation
Owner: Stadtverwaltung Alzey
Client: Ingenieurgemeinschaft TEN, Aachen
- Geschäfts- und Praxisgebäude, Bottrop** (2013)
- Energy consulting, energy concept, EnEV
Architect: Architekturbüro A-D, Gummersbach/Strelzig + Klump, Bottrop
Client: Peter Stadtmann, Bottrop
GFA: 5.300 m²
- Abtei Michaelsberg, Siegburg** (2013)
- 2D-flow simulation, thermal building simulation
Architect: msm, Cologne
Owner: Erzbistum Cologne
Client: TEN, Aachen
- Dr. Franz Köhler Chemie, new production facility building, Bensheim** (2013)
- EnEV, energy consulting
Architect: Kudla + Krupstedt architects, Neustadt
Client: Dorakel Grundstücksverwaltung mbH & Co. Vermietungs KG, Wiesbaden
- Research Building ZEMOS Ruhr-Universität, Bochum** (2013)
- Thermal building simulation
Architect: PASD architects, Hagen
Client: Bau- und Liegenschaftsbetrieb NRW, Dortmund
- Wala Heilmittel Headquarters, Bad Boll (logistics and technical center)** (2012 f)
- Thermal building simulation, building physics
Architect: h4a, Stuttgart
Owner: Wala Heilmittel, Bad Boll
GFA: 29.500 m²
- Showroom Storck, Idstein** (2012)
- Thermal building simulation
Architect: Sever Severain jr., Wiesbaden
Client: Goldbeck Süd GmbH, Frankfurt/Main
GFA: 450 m²
- Admedes Schüssler, Pforzheim** (2012)
- Energy Performance Certificate
Architect: Gewerbebau Schumacher & Partner, Birkenfeld
Client: DAL Bautech, Mainz
- Stadthaus Petri, Braunschweig** (2012)
- Thermal building simulation, controlling
Architect: O.M. architects, Braunschweig
Client: Braunschweiger Zeitungsverlag GmbH & Co. KG
- Isskogelbahn, Bergstation, Zillertal, Gerlos** (2012)
- Thermal building simulation
Architect: Machné architects, Innsbruck
Client: Alpsolar, Innsbruck
- Leica Camera - Leitz-Park, Wetzlar** (2011)
- Thermal building simulation, flow simulation, daylight simulation, life cycle costs, DGNB-/Green Building-certification
Architect: Gruber + Kleine-Kraneburg, Frankfurt am Main
Client: DAL Bautech, Mainz
GFA: 27.000 m²
- Development of ECB Prototypes - Industriehalle** (2011)
- Energy design
Client: Bayer MaterialScience AG, Leverkusen

- The Ritz-Carlton, Wolfsburg** (2010)
- Flow analysis and evaluation of the ventilation and air condition in the entrance hall
Architect: Henn architects, Munich
Client: Autostadt GmbH, Wolfsburg
GFA: 21.000 m²
- Kasino Süd, Bonn Hardthöhe** (2010)
- Thermal building simulation
Architect: Johannes P. Hölzinger, Bad Nauheim
Client: Prof. Dipl.-Ing. Michael Schuchardt, Odenthal
- Pro Logis DC5 Logistics, Leipzig** (2010)
- Thermal building simulation
Architect: Kühling, Paderborn
Client: Goldbeck International, Bielefeld
- Logistics Hall BMW AG, Werk 1.1, Munich** (2010)
- Flow simulation, investigation of the winter comfort
Architect: Bader + Mack architects, Munich
Client: Climaplan GmbH, Munich
GFA: 3.000 m²
- Production Hall, Ed. Wüsthof Dreizackwerk, Solingen** (2010)
- Energy efficiency consulting
Owner: Ed. Wüsthof Dreizackwerk, Solingen
- Phoenix Contact Production and Assembly Hall, Blomberg** (2010)
- Thermal building simulation
Architect: Werner Brandstetter, Bad Pyrmont
Owner: Eisert + Partner, Blomberg
- Federation Tower Moskau** (2008)
- CFD-Simulations of the internal flow
Architect: nps tchoban voss, Hamburg
Client: ISRW Klapdor, Düsseldorf
GFA: 435.000 m²
- RVK Regionalverkehr Cologne GmbH** (2008)
- Study on the usage of hall roofs for PV-Plants
Client: RVK, Cologne
- Küstlers Gartencenter „Factum verde“** (2008)
- Energy concept, conservatory, simulation
Client: Gartenhof Küsters GmbH, Krefeld
Architect: Beckmann-Wenzel, Cologne
GFA: 500 m²
- Kraftwerk Hamburg-Moorburg** (2006)
- CFD-Simulations of the internal flows inside the 100 m high power plant tower
- Windkanalversuche im I.F.I. Aachen
Client: M+W Zander, Leverkusen
- Coal injection Hochofen 8 Duisburg-Hamborn** (2006)
- Simulation of flow around the building and natural cooling
Client: Gertec, Essen
- Flood protection system Cologne-Rodenkirchen** (2006)
- Simulation of drying processes
Client: Graner + Partner, Bergisch Gladbach
- JVA Jülich** (2006)
- Calculation of the sun protection offered by the prison bars
Client: Graner + Partner, Bergisch Gladbach
- Training center Austrian Airlines, Schwechat** (2006)
- building simulation, comfort simulation
Architect: BWM architects, Wien
Client: AUA Austrian Airlines, Wien
GFA: 5.500 m²



- GFR-Extension, Verl** (2006)
- Building simulation
Architect: Heitmann, Gütersloh
Client: GFR Gesellschaft für Regelungstechnik und Energieeinsparung mbH, Verl
- Intercontinental Hotel, Kö, Düsseldorf** (2004)
- Simulation of the hall, reduction of airflows
Client: Ebertz und Partner, Cologne
Architect: HPP architects, Düsseldorf
GFA: 50.000 m²
- Biohof Achleitner, Eferding** (2004 f)
- Passive house energy concept, straw bale insulation, solar concept, cooling concept
Client: EBP Baumeister Preisack MAS, A-Perg
Architect: architekturplus, I-Vahn
- BIOTOP central Administration and production** (2002)
- Energy concept, L-EWT underground channels, conservatory, biomass heating
Client: BIOTOP Landschaftsgestaltung GmbH, Weidling
Architect: G.W. Reinberg, Wien
GFA: 1.000 m²
- Production Hall PolyHiSolidur** (2002)
-Simulation of the heat and airflows in a production hall
Owner: PolyHiSolidur, Vreden
Client: PolyHiSolidur, Vreden
- Power Plant Didcot B, Didcot, GB** (2000)
-Simulation of the heat and airflows in a gas turbine power plant
Owner: Siemens KWU AG
Client: Krantz TKT, Bergisch Gladbach
- Courses and Seminars:**
- Donau-Universität Krems, Department of building and environment** (seit 1996)
Visiting Professor, Member of Faculty, scientific advisory board
- Lecturer of MSc Course Future Building Solutions
- Lecturer of MSc Course Solar Architecture
- Lecturer of MSc Course Daylight Architecture
- Lecturer of MSc Course Facility Management
- Lecturer of MSc Course Climate Engineering
- Bergische Universität GH Wuppertal** (1996)
Seminar ecological building in the faculty 10, Architecture, Prof. Döring
- Fachhochschule Cologne** (1996-1998)
Symposium FUTURE, usage of computer simulation within building services
- Fachhochschule Aachen** (1997)
Conference about compacted housing; with Blumer, Bern; Scheifinger, Wien; Wilkens, Kassel; Finke, Aachen;
Morger, Basel, Stelzhammer, Wien
- Deutsches Zentrum für Luft- und Raumfahrt, Cologne** (1998)
Collaborative project for air and geothermal heat exchangers, details to the 50m-underground channel of settlement in Sagedergasse
- Architektenkammer Rheinland-Pfalz** (1998)
Ways to passive houses; with Ploss, Kaiserslautern
- Österreichische Gesellschaft für Architektur / ZBU** (1999)
Skylines – Do skyscrapers have a promising future? with Schempp, Tübingen; Yeang, Kuala Lumpur; Delugan, Wien;
Eberhard, Zürich; Fuksas, Rom; u.a.
- Forum Zukunft Bauen, Kufstein** (2000)
Concrete in solar architecture; with Hammer, Wien
- Hochschule für angewandte Kunst Wien** (2000)
Guest lecture in the ordinarate for technical extension, Prof. Burgard
- Kongress Bayern Innovativ, Messe Nürnberg** (2001)
Concrete in solar architecture; with Hammer, Wien

- Industriellenvereinigung Vorarlberg, Dornbirn** (2001)
Optimisation of comfort and operating costs; with Pongratz, Wien
- SOCRATES Intensive Programme, Florence** (2002)
Leader of the seminar: Energy efficient technology in bioclimatic architecture
- Forum Zukunft Bauen, Haus der Geschichte, Bonn** (2002)
Concrete in solar architecture
- Energieagentur NRW** (seit 2002)
Leader of the Seminar about EnEV, building energy certificate and building services in the REN-pulse program building and energy
- Architektenkammer der Hansestadt Bremen** (seit 2002)
Leader of the seminar summer insulation, daylight i.a. within the program Bremer Impulse
- Fachhochschule Koblenz** (2003 ff)
Guest lecturer in the faculty civil engineering, Prof. Schuchardt
- Messe BIO CASA, Trieste** (2003)
Lecture about systems integration in low-consumption buildings
- Verbundnetz Gas AG** (2004)
EU-Directive: Buildings put to the test
- Green Building Day at Clean Med Europe, Vienna** (2004)
Examples for successful energy efficiency concepts of German clinic
- Bremer Energie-Konsens** (2004)
Summer suitable design and building; with Probst, Essen und Beck, Springe
- Bartenbach Lichtlabor, Innsbruck** (2005)
Retro perspective Ingenieurbüro P. Jung at work
- Berliner Energietage, dena Berlin** (2005)
Energy certification: Accuracy of calculation method
- Haus der Technik Essen** (2005)
Energy Certification: results from field-test
- Energieagentur NRW** (2005)
Energy Certification: results from field-test
- IHK Aachen** (2005)
Thermal simulation and DIN 18599
- TÜV Rheinland Cologne** (seit 2006)
Energy Certification: Non residential buildings
- TA+E, RWTH Aachen** (2006)
smart.energy – Concepts by IPJ
- GIF Gesellschaft für Immobilienforschung e. V. Wiesbaden** (2006)
Energy Certification and EnEV – what pays off?
- KAP Forum Cologne** (2006)
Pullover and sunglasses, how facades save energy
- VWEV Verlag, Frankfurt** (2006)
Energy Certification – Customer's expectations and economical aspects
- MED-ENEC Conference, Istanbul** (2006)
EU-Projekt Energy Efficiency in the Construction Sector in the Mediterranean
Chairing, moderation, seminar leader
- MED-ENEC Conference, Marrakech** (2007)
EU-Projekt Energy Efficiency in the Construction Sector in the Mediterranean
Chairing, moderation, seminar leader
- Congress TIA Teaching in Architecture, Krems** (2007)
Chairman "Concepts for Coeducation" and "Teaching Concepts", moderation



- RheinEnergie Cologne** (2007 ff)
Technikerbst Energy Certification for non-residential buildings
- Berliner Energietage** (2008)
Energy certification for non-residential buildings: practical experiences
- UNDP-PFF, TCC Zypern, Nicosia** (2008)
Green Building Intensive Workshop
- VDI Wissensforum - Gebäude der Zukunft** (2008)
Energy Certification for non-residential buildings: building projects to the test
- Stadt Sankt Augustin, Baudezernat** (2009 ff)
EnEV for residential and non-residential buildings
- Haus der Technik Essen** (2009 ff)
Daylight within architecture, with Energieagentur NRW
- VDI Wissensforum - Gebäude der Zukunft** (2010)
The renovation of the Kreishaus Siegen
- RWTH Aachen - IBB** (2010)
Concepts for climate-friendly buildings
- Peter Behrens School of Architecture, FH Düsseldorf** (2012)
EnEV 2009 in integrated planning
- IKEA Blue Cube Summit, Copenhagen** (2013)

Research:

- Field trial 2 – Energy Certification for non-residential Buildings** (2006)
Client: dena, Berlin und BMVBS, Berlin
- Quality Assurance for Energy Certification Software** (2008 ff)
Expert hearing
Client: BBR, Bonn
- Guide to Energy Consultancy Type Standard C** (2009)
Client: dena, Berlin
- Research Projects „Teilenergiekennwerte“** (2009 ff)
Client: IWU, Darmstadt
- Passive house of the future – Modernized knowledge transfer between building contractors** (2010)
Client: Bundesministerium für Verkehr, Innovation und Technologie, Wien
- Working group DIN V 18599 and the energetic rating of residential buildings, reflexion of calculation approaches** (2010f)
Expert hearing
Client: BBSR, Bonn
- Entwicklung von Rechenregeln für die Einarbeitung in die Energiebilanz neuer Technologien** (2015f)
Client: Commissaire du Gouvernement à l'Énergie, Luxemburg