

**Selected publications**  
(out of more than 180)

Peer reviewed journal papers



**Prof. Dr. Stefan Lechtenbömer**

**2015**

- Lechtenbömer, S., Schneider, C., Yetano Roche, M., Höller, S. (2015): Re-Industrialisation and Low-Carbon Economy—Can They Go Together? Results from Stakeholder-Based Scenarios for Energy-Intensive Industries in the German State of North Rhine Westphalia, **Energies** 2015, 8, p11404-11429; doi:10.3390/en81011404
- Lechtenbömer, S. (2015): Challenges of electricity based decarbonisation, **Energia, Ambiente e Innovazione**, Speciale I-2015 Transition and global challenges towards low carbon societies, p 26–28, doi: 10.12910/EAI2015-007
- La Motta, S., Hourcade, J.-C., Lechtenbömer, S., Masui, T., Watson, J. (2015): Foreword/Prefazione, **Energia, Ambiente e Innovazione**, Speciale I-2015 Transition and global challenges towards low carbon societies, p 2–3
- Fischedick, M., Richwien, M. Lechtenbömer, S. Zeiss, C., Espert, V. (2015): Klimaschutzpläne und -gesetze – partizipationsorientierte Instrumente vorausschauender Klima- und Standortpolitik, **Energiewirtschaftliche Tagesfragen**, 5, 2015, p 18–21
- Grashof, K., Lechtenbömer, S., Zipp, A., Jachmann, H., Wille-Hausmann, B. Reeg, M. (2015): Monopole, Liberalisierung, Energiewende – Strommarktdesign zwischen Wandel und Konstanz, **Energiewirtschaftliche Tagesfragen**, 9, 2015

**2014**

- Schomerus, T., Hansen, e.g., Lechtenbömer, S. (2014): Dynamik der Energiewende erhalten und erweitern, **GAIA-Ecological Perspectives for Science and Society** 23 (4), 353-355
- Yetano Roche, M., Lechtenbömer, S., Fischedick, M., Gröne, M.-C., Xia, C. Dienst, C. (2014): Concepts and Methodologies for Measuring the Sustainability of Cities, **Annual Review of Environment and Resources**, 2014. 39:519–47, doi: 10.1146/annurev-environ-012913-101223

**2013**

- Skea, J., Hourcade, J.-Ch., Lechtenbömer, S. (2013): Climate policies in a changing world context: is a paradigm shift needed? **Climate Policy**, Vol. 13, No. S01, p1–S4, <http://dx.doi.org/10.1080/14693062.2013.759726>
- Skea, J., Lechtenbömer, S., Asuka, J. (2013): Climate policies after Fukushima: three views, **Climate Policy**, Vol. 13, No. S01, S36–S54, <http://dx.doi.org/10.1080/14693062.2013.756670>
- Lechtenbömer, S., Luhmann, H.-J. (2013): Decarbonisation and regulation of Germany's electricity system after Fukushima, **Climate Policy**, Vol. 13, No. S01, p146–S154, <http://dx.doi.org/10.1080/14693062.2013.754605>

**2012**

- Lechtenbömer, S., Samadi, A. (2012): Blown by the Wind. Replacing Nuclear Power in German Electricity Generation, **Environmental Science & Policy**, 25 (2012) pp. 234 – 241, <http://dx.doi.org/10.1016/j.envsci.2012.09.003>
- Moshiri, S., Atabi, F., Panjehshahi, M., Lechtenbömer, S. (2012): Long run energy demand in Iran: a scenario analysis, **International Journal of Energy Sector Management**, Vol. 6 No. 1, 2012, pp. 120-144 (DOI 10.1108/17506221211216571)
- Lechtenbömer, S., Samadi, A. (2011): Auswirkungen des Atomausstiegs auf die deutsche Stromerzeugung, **Energiewirtschaftliche Tagesfragen**, 1/2 2012

**2011**

- Lechtenbömer, S., Schüring, A. (2011): The potential for large scale savings from insulating resi-

dential buildings in the EU, **Energy Efficiency**, Volume 4, Issue 2 (2011), pp. 257-270 (DOI: 10.1007/s12053-010-9090-6)

Samadi, S.; Lechtenböhmer, S., Fishedick, M. (2011): Kein Grund zur Panik: Preiseffekte eines beschleunigten Kernenergieausstiegs, **Energiewirtschaftliche Tagesfragen**, 61 (7/2011) pp. 8 - 13

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Lechtenböhmer, S., Dienst, C. (2010): Future development of the upstream GHG emissions from natural gas industry, focussing on Russian gas fields and export pipelines, **Journal of Integrative Environmental Sciences**, Issue S1, pp. 39 – 48, DOI: 10.1080/19438151003774463, 2010

Arnold, Karin; Dienst, Carmen; Lechtenböhmer, Stefan (2010): Integrierte Treibhausgasbewertung der Prozessketten von Erdgas und industriellem Biomethan in Deutschland, **Umweltwissenschaften und Schadstoff-Forschung** (2010) 22:135–152

Lechtenböhmer, S. et al. (2010): Redesigning Urban Infrastructures for a Low Emission Future, A Technology Overview, S.A.P.I.E.N.S, **Surveys and perspectives integrating environment and society**, 3 (2010), 2, S. 1-16

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Lechtenböhmer, S. et al. (2009): Smart City – Bausteine auf dem Weg zu einer CO<sub>2</sub>-armen Stadt, **Energiewirtschaftliche Tagesfragen** 59. Jg. H. 11, 8 - 13

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Lechtenböhmer, Stefan; Dienst, Carmen: Treibhausgas-Emissionen zukünftiger Erdgas-Bereitstellung für Deutschland, **Umweltwissenschaften und Schadstoff-Forschung**, 20 (2008), 2, S. 133-144.

Luhmann, H.J., Lechtenböhmer, S., Venjakob, J. (2008): Energieträgerqualitätsziele - ein innovativer Ansatz zur Weitergabe der Synergie von Energieeffizienz- und REN-Verpflichtungen, **Energiewirtschaftliche Tagesfragen** 58. Jg. H. 6, S. 68-72

#### Before 2008 (selected)

Lechtenböhmer, Stefan; Dienst, Carmen; Fishedick, Manfred; Hanke, Thomas; Fernandez, Roger: Tapping the leakages: methane losses, mitigation options and policy issues for Russian long distance gas transmission pipelines. In: **International journal of greenhouse gas control**, 1 (2007), 4, S. 387-395.

Lechtenböhmer, Stefan; Dienst, Carmen; Fishedick, Manfred; Hanke, Thomas: Treibhausgas-Emissionen fossiler Energieträger. In: **BWK**, 57 (2005), 5, S. 62-66.

Lelieveld, Jos; Lechtenböhmer, Stefan; Assonov, Sergey S.; Brenninkmeijer, Carl A.; Dienst, Carmen (2005): Low methane leakage from gas pipelines: a switch from coal or oil to natural gas could mitigate climate effects in the short term. **Nature**, 434 (2005), 7036, p. 841-842.

#### 2016

Moshiri, S., Lechtenböhmer, S. (2016): Sustainable Energy Strategy for Iran. **Wuppertal Institut**, Wuppertal, Germany

Lechtenböhmer, S., Nilsson, L.J. (2016): Sustainable Energy Systems, in: Heinrichs, H. et al.: **Sustainability Science – study & text book**, p. 231-246, **Springer**, [http://dx.doi.org/10.1007/978-94-017-7242-6\\_19](http://dx.doi.org/10.1007/978-94-017-7242-6_19)

#### 2015

Lechtenböhmer, S., Samadi, S. (2015): The power sector – pioneer and workhorse of decarbonisation, in: Dupont, C. and S. Oberthür (eds.), **Decarbonisation in the EU: internal policies and external strategies**, Basingstoke, Hampshire: Palgrave MacMillan

Hillebrand, K., Lechtenböhmer, S. (2015): The Potential for Energy Efficiency in the EU – A Comparison of Studies. Proceedings of the **10th Conference on Sustainable Development of Energy, Water and Environment Systems**, SDEWES2015.0694, 1-17 (2015)

Lechtenböhmer S, Nilsson L.J.; Åhman M., Schneider C: (2015): Decarbonising the energy intensive basic materials industry through electrification – implications for future EU electricity demand, Proceedings of the **10th Conference on Sustainable Development of Energy, Water and Environment Systems**, SDEWES2015.0694, 1-16 (2015)

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Grashof, K., Jachmann, H., Wille-Hausmann, B., Lechtenböhmer, S. (2014): Monopole, Liberalisierung, Energiewende – (Dis-)Kontinuitäten im Strommarktdesign, in: Forschung für die Energiewende – Phasenübergänge aktiv gestalten, Beiträge zur **FVEE-Jahrestagung 2014**, S.43–46; Forschungsverbund Erneuerbare Energien, Berlin 2014.

Books, conference proceedings and papers in monographs

- Samadi, S., Lechtenbömer, S., Prantner, M., Nebel, A. (2014): Vollständig auf erneuerbaren Energien basierende Stromversorgung Deutschlands im Jahr 2050 auf Basis in Europa großtechnisch leicht erschließbarer Potentiale – Analyse und Bewertung anhand von Studien, **Climate Change**, 27/2014, Umweltbundesamt
- Schneider, C., Lechtenbömer, S., Höller, S. (2014): Re-industrialisation and low carbon economy – can they go together? Results from transdisciplinary scenarios for energy intensive industries; **ECEEE 2014 summer study** 2014, p. 515-528
- Lechtenbömer, S. et al. (2014): Kosten- und Modellvergleich langfristiger Klimaschutzpfade (bis 2050), **Climate Change**, 01/2014, Umweltbundesamt

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- Lechtenbömer, S., Samadi, S. (2013): The double challenge: Limiting electricity demand growth while pushing forward electrification of energy demand – Lessons from recent low-carbon roadmaps and scenarios for the EU. Paper accepted **ECEEE 2013 summer study**
- Lechtenbömer, S., Altmann M. (2013): The Greenhouse Gas Balance, **International Shale Gas and Oil Journal**, Vol 1, Issue 0, April 2013, p. 24-29.
- Lechtenbömer, S., Altmann M. (2013): The Greenhouse Gas Balance in: Musialski, C., Altmann, M., Lechtenbömer, S., Zittel, W.: Shale gas in Europe - A Multidisciplinary Analysis with a Focus on European Specificities. **Claes&Casteels Leuven & Deventer**, p. 379-392
- Musialski, C., Altmann, M., Lechtenbömer, S., Zittel, W. (eds.) (2013): Shale gas in Europe - A Multidisciplinary Analysis with a Focus on European Specificities. **Claes&Casteels Leuven & Deventer, The Netherlands**

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- Lechtenbömer, S., Espert, V. (2012): Nachhaltigkeit – Energie unter dezentralem Aspekt. Forum, Hessische Landeszentrale für politische Bildung.

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- Lechtenbömer, S., Samadi, S., Schneider, C. (2011): The Potential Role of Energy Efficiency in the Transition to a Low Carbon Society – A Critical Scenario Review. **ECEEE 2011 summer study, Efficiency First**, p. 125 - 136
- Moshiri, S., Atabi, F., Panjehshahi, M.H., Lechtenbömer, S. (2011): Long Run Energy Demand in Iran: Efficiency and Renewable Energy Scenarios, **USAEE-IAEE WP 11-071**, March 2011

### 2010

- Lechtenbömer, S., Gröne, M.C., Acuner, E., Samadi, S. (2010): Review of Long Term Visions and Strategies for a Sustainable Germany. German Country Brief to the **LCS-R Network Annual Meeting**, Berlin 20-21 September 2010
- Droege P, Radzi, A., Carlisle, N, Lechtenbömer, S. (2010): 100% Renewable Energy-\_- and Beyond-\_- for Cities. Written for the World Future Council and HafenCity University Hamburg **Commission on Cities and Climate Change**

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- Lechtenbömer, S. (2009): Paths to a Fossil CO<sub>2</sub>-free Munich, in: Droege, P. (Ed.) 100% Renewable. Energy Autonomy in Action, Earthscan, London, p. 87 - 92
- Lechtenbömer, S., Thomas, S. Zeiss, C. (2009): The role of energy efficiency in the framework of the EU energy and climate strategy – a policy-based scenario analysis, **ECEEE 2009 summer study • Act! Innovate! Deliver! Reducing energy demand sustainably**, Volume 1, p 11-20
- Supersberger, N., Lechtenbömer, S., Seifried, D. (2009): The role of energy efficiency in the development of the Iranian energy system – energy scenario analysis, **ECEEE 2009 summer study • Act! Innovate! Deliver! Reducing energy demand sustainably**, Volume 1, p 51-62
- Lechtenbömer, S. u. Schneider, C. (2009) GreenTech zur Begrenzung von Klima- und Ressourcenrisiken. Welche Technik brauchen wir? in: **SZENARIEN DER ZUKUNFT Technikvisionen und Gesellschaftsentwürfe im Zeitalter globaler Risiken**. Hg. Forum Umwelt und Technik, RWTH Aachen

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- Akopova, Greta Simeonova, Lechtenbömer, Stefan, Budzulyak, V.V., Samsonov, R.O., Methane emissions in Gazprom's system, **Proceedings of the International Gas Union Research Conference**, Paris 2008
- Dienst, C., S. Lechtenbömer and A. Schüring (2008): Future GHG emissions of gas transport system (focus on Russian export pipelines), poster presentation and paper at IGRC 2008, **Proceedings of the International Gas Union Research Conference**, Paris
- Fischedick, M., Lechtenbömer, S., Hanke, Th., Ramesohl, S. (2008): Angewandte Systemanalyse (Szenariotechnik). HG. FernUniversität Hagen, FHG-Umsicht, **INFERNUM-Lehrmodul**,

Hagen

- Lechtenböhrer, S. (2008): Zur Qualität nationaler Energie- und Emissionsprojektionen. Eine quantitative und hypothesenbasierte Analyse ihrer Genauigkeit am Beispiel der US-Energienachfrage- und Emissionsprojektionen der Jahre 1983 bis 2004, Dissertation zur Erlangung des Doktorgrades der Wirtschaftswissenschaften der Universität Flensburg, Flensburg (<http://www.zhb-flensburg.de/dissert/lechtenboehmer/>)
- Lechtenböhrer, Stefan; Grimm, Vanessa; Mitze, Dirk: Globale Ziele und europäische Szenarien. In: Schüle, Ralf (Hrsg.): **Grenzenlos handeln?: Emissionsmärkte in der Klima- und Energiepolitik**. - München: Oekom-Verl., 2008, S. 166-177.

#### Before 2008

- Lechtenböhrer, Stefan, Adriaan Perrels, Maike Bunse, Anja Scholten (2007): The Blessings of Energy Efficiency in an Enhanced EU Sustainability Scenario, paper 1,113, **ECEEE 2007 Summer Study**, Energy efficiency: Just do it, Vol. 1, p. 41 - 52
- Luhmann, Hans-Jochen; Held, Martin; Lechtenböhrer, Stefan: Verfügbarkeit von konventionellem Erdöl und Feasibility der IPCC-Klimaszenarien. In: **Energiesysteme der Zukunft: Technologien und Investitionen zwischen Markt und Regulierung; 5. Internationale Energiewirtschaftstagung an der TU Wien**, 14. - 16 Februar 2007, Wien, Österreich. - Wien: Inst. für Elektrische Anlagen und Energiewirtschaft, 2007
- Scholten, Anja; Mitze, Dirk; Lechtenböhrer, Stefan; Thomas, Stefan: Toothless tiger?: Is the EU action plan on energy efficiency sufficient to reach its target?. In: Attali, Sophie (Hrsg.): **Saving energy - just do it!: ECEEE 2007 Summer Study**; conference proceedings; 4-9 June 2007, La Colle sur Loup, France; volume 1, panel 1, panel 2, panel 3. - Stockholm: Europ. Council for an Energy Efficient Economy, 2007, S. 317-326.
- Dienst, Carmen, Lechtenböhrer, Stefan et al. (2006): Greenhouse Gas Balance of Natural Gas: New Measurements for Import Process Chain of Russian Natural Gas to Europe. In: **Proceedings of the 23rd World Gas Conference**, Amsterdam 2006, 5-9 June 2006, 11p
- Lechtenböhrer, Stefan; Barthel, Claus; Hanke, Thomas; Wissner, Matthias (2006): Least investment cost strategies for market transformation to high efficiency residential appliances and lighting: results of a country by country scenario analysis for 30 European countries. In: Bertoldi, Paolo (Hrsg.): **Energy efficiency in domestic appliances and lighting: proceedings of the 4th international conference EEDAL '06**; 21-23 June 2006, London, United Kingdom; volume 2. - Luxembourg: Office for Official Publications of the Europ. Communities, 2006, S. 519-528.
- Lechtenböhrer, Stefan et al. (2006): Russian Long distance Gas Transmission Pipelines: Methane Losses, Mitigation Options, and Policy Issues, Wuppertal Institute, US-EPA, ICF-Consulting, In: **Proceedings of EIC CCC 2006**. Ottawa 10-12 May 2006, 8p
- Lechtenböhrer, Stefan; Dienst, Carmen; Fishedick, Manfred; Hanke, Thomas; Akopova, G. S.: GHG-emissions of Russian natural gas industry by gas export to Europe. In: **Fourth International Symposium on Non-CO2 Greenhouse Gases (NCGG-4)**: science, control, policy and implementation; Utrecht, The Netherlands, 4-6 July 2005. - Rotterdam: Millpress, 2005, S. 209-216.
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- Michael Kuhndt, Stefan Thomas, Tomoo Machiba, Stefan Lechtenböhrer, Volker Türk, and Dietmar Schüwer (2005): Sustainable Energy Consumption. Background Paper. **European Conference under the Marrakech Process on Sustainable Consumption and Production (SCP)**, Berlin, 13-14 December 2005.
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