China's energy consumption in the building sector: A Statistical Yearbook-Energy Balance Sheet based splitting method

Tengfei Huo, Hong Ren, Xiaoling Zhang, Weiguang Cai, Wei Feng, Nan Zhou, Xia Wang

PII: S0959-6526(18)30615-2
DOI: 10.1016/j.jclepro.2018.02.283
Reference: JCLP 12230

To appear in: Journal of Cleaner Production

Received Date: 31 October 2017
Revised Date: 20 February 2018
Accepted Date: 25 February 2018


This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.
China’s energy consumption in the building sector: A Statistical Yearbook-Energy Balance Sheet based splitting method

Tengfei Huo\textsuperscript{ab}, Hong Ren\textsuperscript{a}, Xiaoling Zhang\textsuperscript{c}, Weiguang Cai\textsuperscript{ab}, Wei Feng\textsuperscript{b}, Nan Zhou\textsuperscript{b}, Xia Wang\textsuperscript{a}

\textsuperscript{a} School of Construction Management and Real Estate, Chongqing University, Chongqing, 400044, PR China
\textsuperscript{b} China Energy Group, Lawrence Berkeley National Laboratory, 1 Cyclotron Road, CA 94720, USA
\textsuperscript{c} Department of Public Policy, City University of Hong Kong, Hong Kong, PR China

*Corresponding author: W.G. Cai, email: wgcai@cqu.edu.cn

Abstract: China’s energy consumption in the building sector (BEC) is not counted as a separate type of energy consumption, but divided and mixed in other sectors in China’s statistical system. This led to the lack of historical data on China’s BEC. Moreover, previous researches’ shortages such as unsystematic research on BEC, various estimation methods with complex calculation process, and difficulties in data acquisition resulted in “heterogeneous” of current BEC in China. Aiming to these deficiencies, this study proposes a set of China building energy consumption calculation method (CBECM) by splitting out the building related energy consumption mixed in other sectors in the composition of China Statistical Yearbook-Energy Balance Sheet. Then, China’s BEC from 2000–2014 are estimated using CBECM and compared with other studies. Results show that, from 2000–2014, China’s BEC increased 1.7 times, rising from 301 to 814 million tons of standard coal consumed, with the BEC percentage of total energy consumption stayed relatively stable between 17.7%–20.3%. By comparison, we find that our results are reliable and the CBECM has the following advantages over other methods: data source is authoritative, calculation process is concise, and it is easy to obtain time series data on BEC etc. The CBECM is particularly suitable for the provincial government to calculate the local BEC, even in the circumstance with statistical yearbook available
دریافت فوری متن کامل مقاله

امکان دانلود نسخه تمام متن مقالات انگلیسی
امکان دانلود نسخه ترجمه شده مقالات
پذیرش سفارش ترجمه تخصصی
امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
امکان دانلود رایگان ۲ صفحه اول هر مقاله
امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
دانلود فوری مقاله پس از پرداخت آنلاین
پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات