

Buildings Account For 39 Of Co2 Emissions In The United

Special edition of the Federal Register, containing a codification of documents of general applicability and future effect ... with ancillaries.

Report

Code of Federal Regulations, Title 49, Transportation, PT. 1200-End, Revised as of October 1, 2012

Uniform System of Accounts for Railroad Companies

Code of Federal Regulations

Circulars and Bulletins Issued by the Several Divisions and Sections of the United States Railroad Administration from January 1 to December 31, 1918

Buildings consume a substantial amount of energy and adversely affect the global climate and environment. According to the US Department of Energy (DOE), buildings account for 39% of total primary energy consumption and 71% of the electricity consumption. The construction and operation phases constitute the largest proportion of the total energy end-use worldwide (Ma et al. 2012). An innovative and comprehensive set of sustainable materials aiming at the envelope of buildings excluding the roofs is employed to define the renovation alternatives in order to ameliorate the sustainability status of the buildings. The model is comprised of a NSGA-II multi-objective optimization algorithm integrated into a simulation engine. Simulation runs are performed to compute the objective function values and transfer them to the optimization algorithm. A hybrid fuzzy simulation-based optimization model is developed to select the optimum renovation alternatives. The model simultaneously minimizes annual energy consumption and capital cost of an existing office building based on a multi-objective optimization problem. Fuzzy set theory is assigned to the objective functions to address the uncertainty associated with calculation of energy consumption and capital cost values. Conclusively, the model is implemented on a sample case to substantiate the capabilities of the developed model. The case study is a one-story office building with a double skin facade on the south facing facade in Montreal. The results illustrate nine Pareto optimal points and demonstrate that the generated optimum solutions are capable of causing an average of 35% decrease in the annual energy consumption compared to the conventional building scenario.

Federal Register

Appendix to the Journals of the House of Representatives of New Zealand

Criticism of the Preliminary Engineering Report of the Division of Valuation : December 15, 1919

General Services Administration's Economic Recovery Role

DOE/FERC.

The Code of Federal Regulations is the codification of the general and permanent rules published in the Federal Register by the executive departments and agencies of the Federal Government.

Code of Federal Regulations, Title 49, Transportation, PT. 1200-End, Revised as of October 1, 2011

Where To Download Buildings Account For 39 Of Co2 Emissions In The United

The Architectural History of the University of Cambridge, and of the Colleges of Cambridge and Eton

Combined Kansas Reports

Joint Documents of the State of Michigan

2017 CFR Annual Print Title 49 Transportation Part 1200 to End

49 CFR Transportation

Annual Reports

Code of Federal Regulations, Title 49, Transportation, Pt. 1200-End, Revised as of October 1 2009

Treasury Combined Statement of Receipts, Expenditures, and Balances of the United States Government

Theory of accounts, by H.D. Greeley

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Reports and Decisions of the Interstate Commerce Commission of the United States

Proceedings of the City Council ...

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1900-1901