

温晓霞,李长江,眭彦伟,廖允成,王阳峰,杨 飞,孙建阁,蔡小明.退耕区户用沼气的生态环境效益评价[J].农业工程学报,2012,28(10):225-230

退耕区户用沼气的生态环境效益评价

Assessment of ecological environment benefit for household biogas in areas of returning farmland to forest

投稿时间: 2011-10-07 最后修改时间: 2012-03-16

中文关键词: [温室气体](#), [SO₂](#), [沼气](#), [农村户用沼气](#), [林地](#), [生态环境](#)

英文关键词: [greenhouse gas](#) [sulfur dioxide](#) [biogas](#) [rural household biogas](#) [forest](#) [ecological environment](#)

基金项目:陕西省农业温室气体减排项目-沼气项目

作者	单位
温晓霞	1. 西北农林科技大学农学院, 杨凌 712100
李长江	1. 西北农林科技大学农学院, 杨凌 712100
眭彦伟	1. 西北农林科技大学农学院, 杨凌 712100
廖允成	1. 西北农林科技大学农学院, 杨凌 712100
王阳峰	2. 陕西省农业技术推广总站, 西安 710003
杨 飞	2. 陕西省农业技术推广总站, 西安 710003
孙建阁	2. 陕西省农业技术推广总站, 西安 710003
蔡小明	3. 石泉县农业技术推广中心, 石泉 725200

摘要点击次数: **210**

全文下载次数: **78**

中文摘要:

为了评价退耕区户用沼气的生态环境效益,该研究依托陕西省退耕区户用沼气减排项目,根据森林生态服务功能评估规范提供的固碳释氧量计算方法、清洁发展机制(CDM, clean develop mechanism)执行理事会公布的方法AMS-III.R和国际通用的减排量计算方法,采用保护林地面积、温室气体减排量和二氧化硫减排量3个指标对退耕区6个乡镇27543户农村沼气工程生态环境效益进行了评价。结果表明:退耕区农村户用沼气池的建设不仅保护了林地,增加了森林的覆盖面积,而且减少了温室气体和空气污染物SO₂的排放。项目实施后,年保护林地507.77hm²、减排温室气体77428.40t(以二氧化碳计)、减排SO₂17594.57kg。该研究可为农村可再生能源的发展及生态环境的评估提供参考。

英文摘要:

In order to evaluate ecological environment benefits of household biogas in land conversion area, based on the household biogas project in land conversion area of Shaanxi province, the methods of carbon fixation and oxygen release services of Specifications for Assessment of Forest Ecosystem Services in China, methodologies (AMS-III.R) proclaimed by Executive Board of clean develop mechanism(CDM) and international commonly calculation method of emission reduction were used to evaluate the ecological environment benefits of installing household biogas digesters of 2 543 households in 6 towns of land conversion area by calculating the indexes of protected forest area, greenhouse gas and SO₂ emission reduction. The results indicated that installing biogas digesters not only protected and increased the forest area, but also reduced greenhouse gas and SO₂ emission in land conversion area. After the implementation of the household biogas project, forest area of 507.77 hm² was protected annually, and greenhouse gas emissions of 7 428.40 t CO₂ equivalent and SO₂ emissions of 1 594.57 kg were reduced annually. The research provides a reference for rural renewable energy development and evaluation of ecological environment.

[查看全文](#) [下载PDF阅读器](#)

关闭

您是第**5151965**位访问者

主办单位: 单位地址: 北京朝阳区麦子店街41号

服务热线: 010-65929451 传真: 010-65929451 邮编: 100125 Email: tcsae@tcsae.org

本系统由北京勤云科技发展有限公司设计