



DIVISION OF
CORPORATION FINANCE

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

August 16, 2011

Via E-mail

Gale E. Klappa
Chairman, President and Chief Executive Officer
Wisconsin Energy Corporation
231 West Michigan Street
Milwaukee, Wisconsin 53201

**Re: Wisconsin Energy Corporation
Form 10-K for the Fiscal Year Ended December 31, 2010
Filed February 25, 2011
Definitive Proxy Statement on Schedule 14A
Filed March 29, 2011
File No. 001-09057**

Dear Mr. Klappa:

We have reviewed your filing and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter within ten business days by amending your filing, by providing the requested information, or by advising us when you will provide the requested response. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your filing and the information you provide in response to these comments, we may have additional comments.

Form 10-K for the Fiscal Year Ended December 31, 2010

Non-Utility Energy Segment, page 20

1. In an appropriate place in your annual report, please elaborate upon your PTF initiative to explain why you have undertaken this initiative or strategy and its status. Specifically, explain why you have formed a separate entity to construct and hold certain of your generation assets and what your plans are with respect to these assets and whether you intend to construct additional plants under this initiative.

Capital Resources and Requirements, page 50

2. Considering your current liabilities exceed your current assets and with a view to supplementing the tabular disclosure you provide reflecting your capitalization structure and your contractual obligations, please revise to summarize the terms of your outstanding long-term debt. In this regard, we note that you have disclosed the letters of credit that are outstanding on page 51 as well as certain of your recent financing activities on page 50, however, the terms of the remainder of your outstanding debt do not appear to be summarized, at least not all in one place so that investors can appreciate what your liabilities constitute.

Exhibits

3. We note on page 51 that you entered into new credit agreements on December 20, 2010; however, we do not see that those agreements have been filed. In your next periodic report, please file the entire credit agreements, including any exhibits or schedules. While Item 601(b)(2) of Regulation S-K permits you to omit schedules (or similar attachments) if they do not contain information which is material to an investment decision or which is already disclosed in the agreement or disclosure document, there is not a similar provision in Item 601(b)(10) of Regulation S-K.

Certifications

4. In future filings, please revise your item 301 certifications to identify the officer who signed the certifications as the principal executive officer or principal financial officer, as applicable. See Exchange Act Rule Compliance and Disclosure Interpretation 161.02.

Definitive Proxy Statement on Schedule 14A

Compensation Discussion and Analysis, page P-27

Annual Cash Incentive Compensation, page P-27

5. You indicate here that the STPP is intended to reward individual contributions to successful operations. You also indicated in your July 16, 2009 response letter to staff comments on the December 31, 2008 10-K that you would “provide further detail as to how individual performance and contributions factor into compensation decisions for each named executive officer in... future proxy statements.” However, we do not see that additional disclosure. Please provide the disclosure or advise.

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We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes the information the Securities Exchange Act of 1934 and all applicable Exchange Act rules require. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

In responding to our comments, please provide a written statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and
- the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Please contact Ronald E. Alper, Staff Attorney, at (202) 551-3329, or me at (202) 551-3720 with any questions.

Sincerely,

/s/ Mara L. Ransom

Mara Ransom
Legal Branch Chief

cc: James C. Fleming, Esq.
Executive Vice President and General Counsel