DENNIS WATER DISTRICT

Board of Water Commissioners
Minutes of Meeting held
September 23, 2010

A meeting, having been duly posted, was held this date at the Dennis Police Station, Martin Training Room, 90 Bob Crowell Rd., S Dennis. The meeting was called to order by Paul F. Prue, Chairman at 6:00 PM. Also in attendance were Charles F. Crowell and Peter L. McDowell and the following District official:

Sheryl A. McMahon, Clerk & Treasurer
David Larkowski, Superintendent

PUBLIC INFORMATION & COMMENT - None

CUSTOMER ISSUES: None

STATUS ON WIND POWER FEASIBILITY STUDY:

As authorized by the Board last month, the Feasibility Study is being updated in accordance with the Clean Energy Center's (CEC) Block IV application requirements. Mr. Larkowski advised that the updated draft is being reviewed by staff and was not available in sufficient time for dissemination to the Board in anticipation of a joint meeting with the Dennis Selectmen.

During the application process it was discovered that one of the conditions of the CEC grant award was to have a project team or project consultant already in place prior to submission. In the District's case, Boreal Renewable Energy Development, the consultants responsible for the Wind Power Feasibility Study had been authorized to conduct the study and file the grant application. They are not under contract for the actual development of a wind turbine project. The next grant round is expected to be announced in January or February 2011.

As a result of updating the Feasibility Study there were revisions to the estimated wind speed at the proposed wind turbine sites. The wind speed was down-graded slightly which means that the annual power yield from the suggested GE 1.6 MW wind turbine would be lowered from 4.2 MW to 3.4 to 3.6 MW. The net capacity factor went from 29% to 22%. Mr. Larkowski said that he had researched other turbine sites in Massachusetts and Rhode Island and determined that the capacity factors of those turbines in the same class (1.5 MW – 2 MW) the District might build is more in line with the 22% net capacity factor being calculated by Boreal presently. The Superintendent anticipated that the final report would be available at least two weeks prior to the joint meeting with the Selectmen

Mr. Larkowski brought to the Board's attention the recent announcement by the Town of Brewster of their pending agreement with the Cape & Vineyard Electric Cooperative to build two 1.8 MW turbines. CVEC had made a presentation to the Board approximately one year ago. There was a brief discussion regarding the lease payments and power purchase agreements between CVEC and Brewster for two turbines. The complete details are unavailable because they were still be negotiated. On a preliminary basis, Brewster is expecting to receive $50,000 in annual lease payments for each of the two sites and purchase electricity at a reduced rate.

There was a brief discussion regarding the District legal authority to "sell" the surplus power generated by a wind turbine in order to meet the costs of debt service and operations. Since the land that is being proposed for the two sites was purchased with state grand funds for watershed protection, special legislation will most certainly be required if the District were to allow the Town to construct a second wind turbine on the site.

REVIEW OF OPERATIONAL CONDITIONS DURING EMERGENCY EVENT

The Superintendent made a power presentation to the Board regarding the District's ability to provide water during emergency conditions, namely prolonged power outages. He reviewed the standby engine capacity for both the north side and south side with five in each system. Up until the late 1980's water was pumped directly from the ground in to the distribution system with out any treatment.

Standby engines are basically gas engines that run on propane. They do not have generators so there are no lights, no chemical feeds or the ability to monitor pumping flows or chemical treatment. Station 21 is the only station that has an on-site generator. The District has two portable 100kw generators and there are twelve 3500-kw portable generators for use at the corrosion stations. Mr. Larkowski stated that his goal is have a sufficient number of on-site generators installed for each system to meet emergency production needs. He said that the many of the standby engines are decades old and are near the end of their useful life.

Goals during a power outage include meeting the domestic demand for potable water, sufficient pressure for fire protection and maintaining water quality. The stations are a mix of old equipment and new technologies. Today, the system requires the addition of potassium hydroxide for corrosion control and as an oxidant for iron removal and the addition of chlorine.

Mr. Larkowski explained the inherent problems of safely operating a pumping and treatment facilities without the benefit of electricity. Operating the facilities become very labor intensive and requires the operator to bypass chemical safety features in order to do any treatment. The facilities varying greatly in terms of their equipment and condition and requires the operator to manually keep track of many things simultaneously. This causes the Superintendent to have serious concerns about the safe operation of the water system.

In anticipation of Hurricane Earl, the Superintendent conducted a run-through at Station 19. He reported that it took three operators four hours to get the station operational without the use of electricity and provided a step-by-step review of the process.

To remedy the situation, the Superintendent is proposing that the Board consider the purchase and installation of large-sized generators which would have automatic transfer switches. The cost would be approximately $24,000 to $30,000 for each generator and $1,500 to $3,500 for transfer switches plus ancillary materials. The labor for this project would be done in-house beginning with the largest wells first. If authorized he would undertake the project over a two-year period with appropriations of $180,000 in FY 2012 and $70,000 in FY 2013. This would provide a pumping capacity of 3,650 gallons per minutes for the north side and 3,500 gallons per minute for the south side or about 62% of the total capacity under normal conditions. Mr. Larkowski considers the lack of adequate standby capacity one of the most vulnerable aspects of the system.

Ms. McMahon advised the Board that the Fire Chief had made a presentation to the Selectmen last week of an upgrade in the ISO fire rating for the Town of Dennis. The rating is based on two major components; fire service (60%) and water system (40%). She noted that the score for the District's water system was 39.4 out of 40. The Board members received copies of the recently published ISO report. Chairman Prue acknowledged that this achievement is the result of many years of voter support for the improvements that needed to be done.

On a motion made by Peter L. McDowell, and duly seconded, the Board ***UNANIMOULSY VOTED: to adjourn the meeting at 6:45 PM.***

Respectfully submitted,

Sheryl A McMahon, Clerk