Policy: IC-06-01
Policy Title: Power Share Procedure
Policy Purpose: Procedures to Follow During Energy Conservation Program with Duke Energy
Implementation Date: 7/18/2006
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TOWN OF WESTFIELD
PUBLIC WORKS DEPARTMENT

POWER SHARE PROCEDURE

Scope

The Power Share program is an energy conservation program with the Cinergy power utility. Under the agreement with Cinergy, the Westfield Public Works River Road and Wastewater Treatment plants will divert their energy loads to other sources during an event period specified by Cinergy. Public Works operations will need to prepare for these events and monitor the affected systems to assure system integrity.

Power Share events run from 11:00 (11:00 A.M.) to 19:00 (7:00 P.M.) EST or 12:00 (12:00 P.M.) to 20:00 (8: P.M.) DST on weekdays only. Notification will be made by 15:00 (3:00 P.M.) EST or 16:00 (4:00 P.M.) DST on the day prior to the event.

Although participation in the Power Share program is a cost saving effort, system integrity must take precedence. All Supervision and Operational personnel must continue to monitor system operations, and be prepared to take appropriate actions, to assure safety and reliability of utility services.

Procedure

1. On the day prior to the event, Cinergy will notify the Instrumentation and Control Supervisor of an impending event on the following day. This notification will come no later than 15:00 (3:00 P.M.) EST or 16:00 (4:00 P.M.) DST.
2. Upon notification the Instrumentation and Control Supervisor will notify the following personnel by e-mail with a confirmation telephone call;

    i. Public Works Director
    ii. Public Works Operations Manager
    iii. Water Supervisor
    iv. Wastewater Supervisor

    If the Instrumentation and Control Supervisor is not available the Public Works Director is designated as an alternate and will assign the I&C duties accordingly.

3. The Water Supervisor will notify Water personnel and confirm the readiness of the River Road Water Treatment Plant generator.

4. The Wastewater Supervisor will notify pertinent Wastewater Plant personnel and confirm the readiness of the Wastewater Treatment Plant generator.

5. The Water and Wastewater Supervisors will coordinate and schedule personnel for the event day to provide staffing for the event period on the following day.

6. The Instrumentation and Control Supervisor will evaluate the system demand and determine the best plan of action for filling all water storage facilities to their maximum capacity.

7. On the event day, the Instrumentation and Control Supervisor will confirm if the event is still planned. He will also establish the load that is expected to be diverted and the plant run time for the Cherry Tree Plant for the previous day.

8. The Instrumentation and Control Supervisor, or designated alternate, will access the Cinergy website and make the appropriate nominations for the event day.

9. On the event day, at the earliest convenient time, the Instrumentation and Control Supervisor, Water Supervisor, and the Wastewater Supervisor will meet to determine the plan of action to transfer the load of the plants.

10. The Instrumentation and Control Supervisor will adjust the system controls to complete bringing all storage facilities to their maximum capacity. The timing of this activity will be dependent upon system demand and current storage inventory. All elevated storage and the clear well at the River Road Plant should be at maximum capacity at 10:45 (10:45 A.M.) EST or 11:45 (11:45 A.M.) DST.

11. At 10:00 (10:00 A.M.) EST or 11:00 (11:00 A.M.) DST the Wastewater Supervisor will coordinate with plant personnel to evaluate any detrimental affects to plant operation that will be brought about by a transfer in power. At this time measures will be determined and taken to alleviate any anticipated problems when the transfer is initiated.

12. At 10:30 (10:30 A.M.) EST or 11:30 (11:30 A.M.) DST, River Road personnel will begin the process of reducing ancillary load before shutting down the plant production. The following equipment will need to be shut down;

    i. The Dehumidifier in the High Service Room
    ii. The Dehumidifier in the Filter Room
    iii. The Air Conditioning Unit in the High Service Room
    iv. The Air Conditioning Unit in the Office

    Separate procedures for identifying this equipment and shut down procedures for each will be provided for the plant.

13. At 10:50 (10:50 A.M.) EST or 11:50 (11:50 A.M.) DST the Instrumentation and Control Supervisor will adjust the plant settings to take the River Road Plant off line.

14. At 10:50 (10:50 A.M.) EST or 11:50 (11:50 A.M.) DST Wastewater Plant personnel will manually transfer the plant power to the generator.

15. The Wastewater Supervisor will coordinate with plant personnel to complete a plant operation review and confirm plant operations are normal.

16. During the event period, analysis of system operation and performance will be conducted to determine the status of the Water System and the amount of available storage capacity. If any elevated storage facility inventory falls below an acceptable limit, actions will be taken to redirect available storage and activate alternate supplies if necessary. The following action list will be used as a guideline for responding to water demand during the event;

    a. Activate the West Booster and utilize the tank inventory.
    b. Redirect the West System Flow into the North System.
    c. Activate the Cherry Tree Plant, within the run limitations.
    d. Activate the River Road Generator utilizing the Clear Well capacity.
    e. Activate the River Road Well Field.

17. System and weather conditions will vary making it necessary for an action plan to be determined on the event day. The action list above is meant to be used as a guideline for operation and may be changed as deemed necessary by Supervisory and Operational staff.

18. At the end of the event period, plant personnel will coordinate with Supervision to place the River Road and Wastewater Treatment Plants back into regular service.

19. At 19:00 (7:00 P.M.) EST or 20:00 (8:00 P.M.) DST the River Road Generator will be deactivated and the plant will be returned to Cinergy power. After the power transition is complete the control set points will be reset to the normal settings as designated by the Instrumentation and Control Supervisor.

20. All ancillary power load equipment will be reenergized at the River Road Plant.

21. River Road Plant personnel will confirm the generator has completed it's cool down period and successfully shut down.

22. At 19:00 (7:00 P.M.) or 20:00 (8:00 P.M.) DST Wastewater Plant power will be returned to Cinergy Power and the generator will be activated.

23. Wastewater Plant personnel will complete a plant review, coordinating with the Wastewater Supervisor, to confirm proper plant operation after the power transfer.

24. Wastewater Plant personnel will confirm the generator has completed it's cool down period and successfully shut down.

25. Both the Water and Wastewater Divisions will notify the Instrumentation and Control Supervisor when all facilities have been successfully returned to normal operation.

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