

## MEMORANDUM

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August 10, 2012

**TO:** Finance Committee

**FROM:** Eric S. Stuckey, City Administrator  
Russ Truell, Assistant City Administrator  
Mark Hilty, Water Management Director

**SUBJECT:** TVA-EnerNOC Program

### Purpose

The purpose of this memorandum is to present information to the Finance Committee regarding the TVA-EnerNOC program for possible implementation at the City of Franklin Water Reclamation Facility (WRF).

### Background

TVA-EnerNOC is a Tennessee Valley Authority demand response program managed by EnerNOC. The primary goal of the program is to reduce electrical consumption during peak demands thus reducing the cost of generation or purchase of electricity that is ultimately passed on to consumers. EnerNOC serves as the manager of the program and performs the coordination and reporting for both the TVA and the customer. Detailed information is presented in the attached Demand Response Sales and Service Agreement.

As a participant in TVA-EnerNOC customers are subject to demand response events that request curtailment of electrical consumption. The events are limited to six times per calendar month and may last between two and eight hours per event. The program can provide a financial benefit if the City WRF is able to curtail electrical consumption during demand response events. The estimated annual benefit to the City based on initial meetings with EnerNOC is approximately \$16,000 with a 3 year contract value of almost \$50,000 (please refer to the attached Demand Response Earnings Estimate). This benefit will be refined after on-site testing and validation is performed. It is important to note that there are no penalties should the City not be able to curtail consumption.

In addition, program participants have the benefit of "live" metering on the accounts that are involved in the curtailment. These data are made available to the City in real time via the internet. These data can help refine day to day energy consumption, help identify scheduling (in certain circumstances) of operations based on demand peaks and a number of other benefits that may further reduce energy expenditures.

### Financial Impact

Potential revenue source and reduction of expenditures with an annual value of approximately \$16,000.

### Options

Recommend or not recommend participation in the TVA-EnerNOC program

### Recommendation

Staff recommends the City WRF participate in the TVA-EnerNOC program.



## Demand Response Sales and Services Agreement

This Demand Response Sales and Services Agreement (this "Agreement"), effective as of \_\_\_\_\_ ("Effective Date"), the scope of which is described more fully below, is made by and between EnerNOC, Inc. ("EnerNOC"), located at 101 Federal St., Suite 1100, Boston, MA 02110 USA, and City of Franklin Tennessee ("Customer"), located at 109 3rd Avenue South, Franklin, TN 37064. EnerNOC and Customer are defined herein as the Parties ("Parties") to this Agreement.

1. **Term.** This Agreement shall commence on the Effective Date and end 36 months following the Effective Date (the "Term").
2. **EnerNOC Managed Services**
  - a. **Scope of Services.** EnerNOC agrees to manage Customer's participation in the demand response program(s), as further described in Attachment(s) A-1 attached hereto (each individually the "Program" and collectively, the "Programs"), in accordance with the rules set forth by the applicable independent system/grid operator and/or utility, which are subject to amendment by the applicable independent system/grid operator and/or utility from time to time. EnerNOC will (i) work with Customer to develop an appropriate curtailment plan for Customer's business; (ii) complete all necessary permits and associated reporting on Customer's behalf; (iii) register Customer's Accepted Capacity (as defined in Attachment(s) A-1); (iv) manage Customer's curtailable electrical capacity in the Programs and, upon notification by EnerNOC and acceptance by Customer, provide real-time support to Customer during demand response events ("Demand Response Events") via, at Customer's sole discretion, direct load control or manual implementation by Customer, as applicable; and (v) reconcile all Program payments in accordance with the rules set forth by the applicable independent system/grid operator and/or utility and as further described in Attachment(s) A-1. In addition, as necessary, EnerNOC will coordinate with Customer's host utility to capture kilowatt-hour (kWh) pulses from the Customer's primary utility meter to provide Customer near real-time, Internet-enabled power monitoring.
  - b. **EnerNOC System.** EnerNOC, as it deems necessary and at its sole option, may equip one or more of Customer facility address (each a "Site Address") as identified on Attachment(s) A-2 hereto with the EnerNOC system, which includes an EnerNOC Site Server ("ESS") that can, at Customer's sole discretion, enable remote generator start/stop, and/or direct load management, power metering, data collection, near real-time data communication, and Internet-based reporting and analytics. Subsequent to the date hereof, Attachment(s) A-2 may be updated in writing from time to time by the Parties to reflect additional Site Addresses.
3. **Customer Support Requirements**
  - a. **ESS Installation.** Within fourteen (14) days of notification from EnerNOC of an ESS installation requirement, Customer shall provide either a static or non-static, as applicable, Internet Protocol (IP) address and Local Area Network (LAN) access that allows for Internet-based communication of Site Address' electricity consumption and Demand Response Event performance.
  - b. **Acceptance Testing.** Customer agrees to collaborate with EnerNOC in testing the ESS at each Site Address where the ESS is installed in a timely manner prior to registering with the Program(s).
  - c. **Event Performance.** Customer agrees to use commercially reasonable efforts to generate and/or reduce electrical demand to achieve Accepted Capacity as defined in Attachment(s) A-1 at each Site Address when notified by EnerNOC during Demand Response Events. Customer and EnerNOC understand that the curtailable electrical capacity identified in Attachment(s) A-2 does not represent Accepted Capacity and is solely the Parties' best estimate of performance and that Accepted Capacity may vary.
  - d. **Nondisclosure to Third Parties.** Customer and EnerNOC acknowledge that in its relationship with the other Party, it may receive information including (but without limitation): confidential information, business strategies, financial information, information relating to the ESS and the EnerNOC System, and information contained in this Agreement, including the terms of the revenue sharing arrangement described in Attachment(s) A-1 (all collectively "Confidential Information"). Except as required by applicable law or regulation or as expressly set forth in Subsection 3(f) hereof, neither Party shall disclose any Confidential Information to any third party or allow any third party access to such Confidential Information.
  - e. **Trade Secret Protection Obligations.** Customer shall not alter, reverse engineer, disassemble, decompile or copy the ESS or any other EnerNOC System components and shall not allow any third party to use, access, or examine the ESS or any other EnerNOC System components.
  - f. **Use of Confidential Information.** Notwithstanding anything contained herein to the contrary, Customer acknowledges that EnerNOC may receive Confidential Information of Customer through data collected by the ESS and the EnerNOC System, which may be disclosed by EnerNOC (i) to the applicable independent system/grid operator and/or utility as solely necessary for the performance of this Agreement and (ii) to any subcontractors or other agents of EnerNOC.
  - g. **Service Provider Limitation.** Customer agrees not to contract with any other demand response service provider for the Term of this Agreement.
  - h. **Logo Authorization.** In connection with this Agreement, Customer hereby consents to EnerNOC's use of Customer's name and logo in EnerNOC's promotional materials, including, but not limited to, website, presentations and other printed materials. EnerNOC acknowledges that Customer is the owner of all right, title and interest in and to the Customer's name and logo and shall not take any action that is inconsistent with such ownership. EnerNOC shall not, by any act or omission, use Customer's name or logo in any manner that tarnishes, degrades, disparages or reflects adversely on Customer or its business or reputation.



4. General Terms

- a. Limitation on Liability. EnerNOC's liability hereunder is limited to direct actual damages as the sole and exclusive remedy, and total damages shall not exceed the lesser of (i) the total amount paid to Customer under this Agreement during the six-month period immediately preceding the event giving rise to the claim(s) or (ii) \$100,000. All other remedies or damages (at law, in equity, tort, contract, or otherwise) are expressly waived, including any indirect, punitive, special, consequential, or incidental damages, lost profit, or other business interruption damages.
b. Choice of Law. This Agreement shall be governed by and construed and enforced in accordance with the laws of the State of Tennessee, without giving effect to choice of law rules.
c. Miscellaneous. Customer may not assign any of its rights or delegate any of its performance obligations hereunder without the prior written consent of EnerNOC. This Agreement contains the entire agreement between Customer and EnerNOC and may only be amended in writing signed by each of the Parties. If any of its provisions shall be held invalid or unenforceable, this Agreement shall be construed as if not containing those provisions and the rights and obligations of the Parties hereto shall be construed and enforced accordingly. This Agreement shall be binding upon the Parties together with their successors and assigns.
d. Force Majeure. The Parties shall be excused for any failure or delay in the performance of their obligations hereunder due to acts of God or any other legitimate cause beyond their reasonable control.
e. Termination. EnerNOC may terminate this Agreement immediately if the Program(s) is materially altered, suspended or ended.
f. Notices. Any notices required or permitted to be given hereunder by either Party to the other shall be given in writing: (1) by personal delivery; (2) by electronic facsimile with confirmation sent by United States first class registered or certified mail, postage prepaid, return receipt requested; (3) by bonded courier or by a nationally recognized overnight delivery company; or (4) by United States first class registered or certified mail, postage prepaid, return receipt requested, in each case, addressed to the Parties as follows (or to such other addresses as the Parties may request in writing by notice given pursuant to this Section): EnerNOC, Inc., Attn: Deputy General Counsel, 101 Federal Street, Suite 1100, Boston, MA 02110; and to the Customer at City of Franklin Tennessee, at 109 3rd Avenue South, Franklin, TN 37064.
g. Insurance. EnerNOC shall maintain

Commercial General Liability Insurance with limits of \$1,000,000 per occurrence and \$2,000,000 aggregate
Automobile Liability Insurance with limits of \$1,000,000 per occurrence combined single limit
Workers' Compensation and Employers' Liability Insurance with limits of not less than \$500,000

All insurance carriers must have an AM Best rating of A-VIII or better. Upon request of Customer, Customer shall be listed as a certificate holder and additional insured on the Commercial General Liability policy. Customer shall be notified in writing at least thirty (30) days prior to cancellation of any insurance policy.

EnerNOC, Inc.

City of Franklin Tennessee

Name: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Signature: \_\_\_\_\_

Signature: \_\_\_\_\_



## Attachment A-1 TVA-EnerNOC DemandSMART

1. **Program Description.** The TVA-EnerNOC DemandSMART program (the "Program") is a demand response program that compensates electricity users for reducing consumption when demand for electricity is high. The program is designed to help maintain reliable and affordable electricity across the Tennessee Valley Authority (TVA) footprint.
2. **Program Rules.** The terms of this Agreement will reflect program terms and conditions which may be amended from time to time by TVA and EnerNOC, the current terms of which are summarized below.

<i>Demand Response Events</i>	Demand Response Events shall include, collectively, Peak Events, Emergency Events, and Offpeak Events (collectively, "Demand Response Events").
<i>Peak Events and Emergency Events</i>	Peak Events and Emergency Events may only be called during non-holiday weekdays 12:00 PM to 8:00 PM Central Time from April 1 to October 31, and 5:00 AM to 1:00 PM Central Time from November 1 to March 31 (the "Program Period").
<i>Offpeak Events</i>	TVA reserves the right to call Offpeak Events outside of the Peak Event window. Customer shall use commercially reasonable efforts to respond to Offpeak Events. Offpeak Events shall have no impact on Capacity Payments as defined in Subsection 4(a), but will be included in Energy Payments as defined in Subsection 4(b).
<i>Event Trigger</i>	Demand Response Events are initiated at TVA's discretion, usually during times of high electricity prices or high system demand.
<i>Advanced Notification</i>	Customer is expected to reduce demand by the start of the Demand Response Event and will be provided a minimum of 30 minutes advance notice.
<i>Event Frequency &amp; Duration</i>	Demand Response Events may last between two (2) and eight (8) hours. Peak Events may be dispatched by TVA up to two (2) consecutive program days and up to six (6) times during a calendar month. The annual hourly limitation for Peak Events is forty (40) base hours per year, with additional Emergency or Offpeak Events in the case of a TVA system emergency.

3. **Customer Capacity**
  - a. **Accepted Capacity.** For purposes of this Agreement, Accepted Capacity shall represent the best estimate of Customer's performance based on analysis of consumption data and pre-enrollment testing. Customer agrees that the Accepted Capacity may be adjusted by EnerNOC in the future to reflect actual performance, changes in facility operations, Program rules, regulations and/or other relevant information.
  - b. **Delivered Capacity.** For purposes of this Agreement, "Delivered Capacity" for a particular month will be calculated as the average difference between the measured energy demand (in kW) and baseline energy usage over each five-minute interval of each Demand Response Event in such month.
4. **Payments**
  - a. **Capacity Payments.** EnerNOC will pay Customer \$22.00 divided by twelve (the "kW Rate") multiplied by either (i) the Customer's Accepted Capacity if no Peak Events have been initiated, or (ii) the Customer's Delivered Capacity following a Demand Response Event ("Capacity Payment"). If Customer's Delivered Capacity is less than 50% of Accepted Capacity, then Customer shall receive no Capacity Payment for that month. Beginning on January 1, 2012, the kW Rate will be increased each year effective January 1 by the greater of (i) 1.5% or (ii) the Chain-Type United States Gross Domestic Product Price Index.
  - b. **Energy Payments.** In months when one or more Peak Events are called, EnerNOC will pay Customer Energy Payments in connection with Customer responding to a Demand Response Event when notified by EnerNOC. For Peak Events, this shall be 75.00% of the energy strike price associated with program dispatch, which varies based on the spot price of gas. For Emergency and Offpeak Events, this shall be 75% of the energy strike price associated with emergency dispatch, which varies based on the average cost of electricity.
  - c. **Payment Cap.** Capacity Payments are capped at 105.00% of Accepted Capacity. EnerNOC may, at its discretion, remove minimum and maximum caps for a single event on a case by case basis as conditions warrant.
  - d. **Underperformance.** *In no event shall Customer be penalized for underperformance or non-performance, other than to have future or event-month payments reduced to reflect actual performance as described in Section 3-b above.*
  - e. **Payment Timing.** EnerNOC shall make quarterly payments to Customer of Customer's share of all payments received by EnerNOC from TVA during the preceding quarter in connection with Customer's participation in the Program. All Payments will be made within forty-five (45) days of EnerNOC's receipt of total payment from TVA.
  - f. **Timing of First Payment.** Initial payments will begin to accrue on the first day following enablement, EnerNOC testing, and registration of the Accepted Capacity with TVA.



5. **Termination.** In the event Customer's Contract Demand for a Site Address (as set forth in the customer's electrical power contract with their serving TVA Power Distributor) exceeds 5 MWs, Customer shall have the right to terminate this Agreement with respect to such Site Address at any time during the Term upon twelve (12) months prior written notice to EnerNOC. Following the one-year anniversary of the Effective Date, Customer shall have the additional right to terminate this Agreement upon twelve (12) months prior notice to EnerNOC in the event Customer's host utility offers a demand response program.
6. **Customer Representations and Warranties.** Customer hereby represents and warrants to EnerNOC that the following statements are true: (i) Customer does not and will not participate in any of TVA's interruptible products and (ii) Customer is not being served directly by, and will not be served directly by, TVA in connection with any demand response program. In addition, Customer hereby agrees and acknowledges that Customer shall not meet any of its obligations under this Agreement through the use of diesel-powered back-up generation, and that the use of such diesel-powered back-up generation for performance under this Agreement is strictly prohibited by EnerNOC and TVA.



### Attachment A-2

Site Name	Site Address	Estim. Summer Capacity (kW)	Estim. Winter Capacity (kW)
Franklin WWTP	135 Claude Yates Dr Franklin, TN 37064	425	425

## Demand Response Earnings Estimate

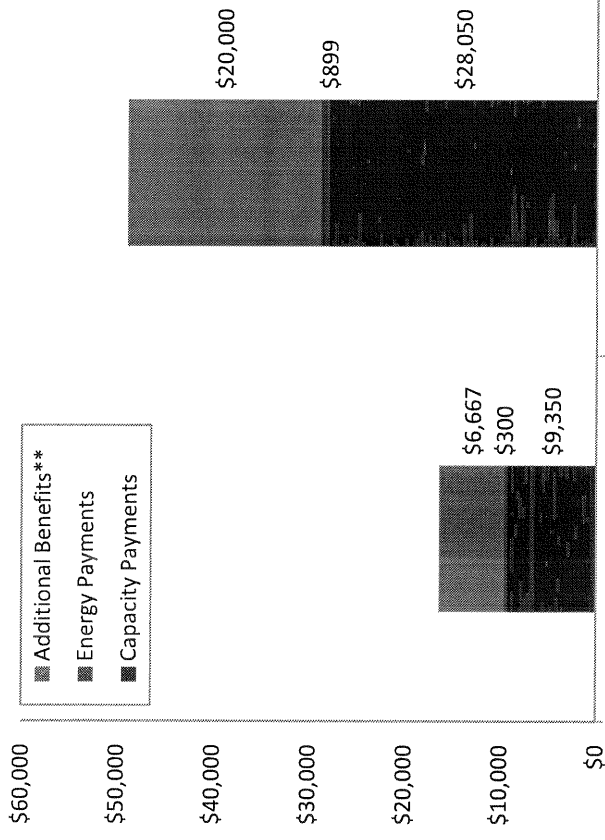
Prepared for:  
 Juan Davis  
 Mark Hilty, Franklin WWTP  
 RE: Demand Response at WWTP Facility

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<b>Annual Value</b>	<b>\$16,316</b>
<b>Total Value</b>	<b>\$48,949</b>

<b>Estimated Total</b>	<b>\$16,316</b>
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Note: may range ± 10% based on future prices and nominations



Program Selections	
Summer	425
Winter	425
<b>Weighted-Average Participation (kW)</b>	<b>425 kW</b>

Other Considerations	
Value of EnerNOC Site Server(s)	\$20,000
Contract Length	3 Years

**Additional Benefits**

- Free real-time energy meters, including installation & maintenance
- Protecting your operation and your community
- Online access to your real-time energy data utilizing EnerNOC's DemandSMART portal

\*\* Value of EnerNOC Site Server(s) hardware, installation and maintenance: \$5,000 per server