

**CITY CLERK MEMORANDUM**  
**16-05**

**DATE:** February 8, 2016  
**TO:** Honorable Mayor and Members of City Council  
**FROM:** Bruce M. Applegate Jr., Acting City Clerk  
**SUBJECT:** SUPPLEMENTAL INFORMATION FOR THE FEBRUARY 8, 2016 CITY COUNCIL AGENDA

The following information is provided as an addition to the February 8, 2016 City Council Agenda packet:

- Backup information is attached for the resolution introduced in the February 5, 2016 addition to the City Council agenda pertaining to the Tennessee Valley Authority Extreme Energy Makeover Grant.

City Council will need to consider an amendment to the agenda to formally include the aforementioned items.

The proposed addition will be added to the City's website and a copy will be placed in your mailbox.



Bruce M. Applegate Jr.

cc: Mark S. Watson, City Manager  
Kenneth R. Krushenski, City Attorney  
Department Directors  
Knoxville News Sentinel  
The Oak Ridger  
Oak Ridge Today  
BBB Communications Channel 12

**PROFESSIONAL SERVICES AGREEMENT  
(Extreme Energy Makeover Project – Grant Administration)**

This Agreement entered into this 8th day of February 2016, between the City of Oak Ridge, Tennessee, P.O. Box 1, Oak Ridge, Tennessee 37831, hereinafter referred to as the "City," and Gilmartin Engineering Works, Inc., 40 New York Avenue, Suite 201, Oak Ridge, Tennessee 37830, hereinafter referred to as "Gilmartin."

WITNESSETH:

WHEREAS, the City is in need of professional engineering and support services related to the City's Extreme Energy Makeover Project; and

WHEREAS, Gilmartin, as the team leader for this Project during the application phase, is qualified to provide such services and has provided a proposal for the same, which proposal is reasonable to the City.

IT IS THEREFORE AGREED that Gilmartin will provide the following services:

1. SCOPE OF WORK

Gilmartin shall provide to the City qualified and professional personnel, including but not limited to professional engineers licensed in the State of Tennessee, to provide professional engineering and support services for the City's Extreme Energy Makeover Project. Gilmartin shall provide the following:

- A. The services as set forth in Gilmartin's proposal, dated February 2, 2016, attached hereto and incorporated herein by reference as Exhibit A.
- B. All services and deliverables required for the City as set forth in the contract between Tennessee Valley Authority (TVA) and the City for the Extreme Energy Makeover Project, attached hereto and incorporated herein by reference as Exhibit B, with specific reference to Exhibit B Attachment A – Scope of Work. This shall include but not be limited to administration and oversight, marketing, community engagement, communication/education, implementation, subcontractor management, measurement and reporting, maintenance, and retaining contractors to complete the energy upgrades. It is the City's intention to purchase the bulk materials (HVAC units, water heaters, and insulation) for this Project.

2. TERM

This Agreement shall commence on the date first written above and shall terminate on December 31, 2017. It is expected that work will begin immediately upon the City's issuance of a written Notice to Proceed to Gilmartin. Gilmartin shall provide the services in a manner that will ensure the City's adherence to the Schedule set forth in Exhibit B Attachment A – Scope of Work.

3. COMPENSATION

For the provision of such services, the City shall pay Gilmartin up to \$2,063,172.00, which compensation includes but is not limited to Gilmartin's cost of Project administration and oversight, marketing costs, community engagement costs, communication/education costs, implementation costs, subcontractor management funds, measurement and reporting costs, and maintenance costs. Gilmartin understands that the compensation amounts provided for herein must be eligible for reimbursement by the City from TVA under the contract between TVA and the City for this Project. Any compensation paid under this Agreement to Gilmartin that is not eligible

for reimbursement by the City from TVA shall be returned to the City within thirty (30) days of notice by the City to Gilmartin. In such event, Gilmartin will be given the opportunity to provide additional documentation to the City for re-submittal to TVA for reimbursement; however, should TVA still not allow reimbursement of the expenditure Gilmartin shall return the un-reimbursable funds back to the City within thirty (30) days of TVA's decision.

Gilmartin shall submit monthly invoices detailing the services provided for the preceding month (billing period) complete with necessary support documentation. The City shall pay such invoices within thirty (30) days of receipt for satisfactory services completed. The compensation provided for herein is the entire compensation to be provided. Any services or fees beyond the scope shall be by written authorization by the City.

Gilmartin shall maintain accurate records to support all billing and shall allow the City to inspect such records at reasonable times during business hours. Gilmartin shall maintain such records open to inspection for a period of at least seven (7) years from the date of termination of this Agreement.

#### 4. WORK PRODUCTS AND DOCUMENTS

All documents prepared by Gilmartin pursuant to this Agreement are works for hire for the benefit of the City and the results of all work performed under this Agreement are the property of the City. Gilmartin shall provide to the City an electronic copy of all such work products, including reports, papers, memos, and correspondence as requested under specific task orders. Upon the City's request, Gilmartin shall promptly supply the City with all notes, writings, lists, files, reports, correspondence, technical data, electronic files, or any other tangible product or document which Gilmartin produced or received while performing work under this Agreement.

#### 5. INSURANCE

- A. Gilmartin shall secure and maintain, at its own expense, during the course of performance of the services under this Agreement, adequate liability insurance as will protect Gilmartin from claims of negligence, bodily injury, death or property damage which may arise from the performance of services under this Agreement; comprehensive automobile insurance at all times while working on City property; and worker's compensation insurance in an amount, at minimum, in accordance with statutory requirements. At a minimum, Gilmartin must maintain insurance in the following amounts:
1. Comprehensive General Liability: Combined single limits \$1,000,000 each occurrence.
  2. Workers' Compensation: Statutory limits.
  3. Workers' Compensation – Employer's Liability: \$1,000,000, statutory limits.
  4. Comprehensive Automobile Liability (Including all owned, non-owned and hired vehicles): Combined single limits \$1,000,000 each occurrence.
  5. Professional Liability: \$1,000,000
- B. Gilmartin shall submit a certificate or certificates evidencing such insurance at the time of entering into this Agreement. Gilmartin shall provide at least thirty (30) days prior written notice of cancellation, expirations, terminations and alterations of the insurance policies. The City and TVA and the United States and their officers, agents, employees, and

volunteers shall be named as an additional insureds on a primary noncontributory basis to liability policies with respect to this Project.

- C. The requirements contained herein as to types and limits, as well as the City's approval of insurance coverage to be maintained by Gilmartin are not intended to and shall not in any manner limit or qualify the liabilities and obligations of Gilmartin under this Agreement.
- D. Failure to provide and maintain current, valid insurance certificates throughout the contract period shall be a material breach of this Agreement for which the City may exercise any rights or remedies it may have under this Agreement or at law, including the right to withhold moneys due and owing Gilmartin hereunder.
- E. Other Requirements – Please see Exhibit B, Section 8, for further insurance requirements.

6. NO DISCRIMINATION

In carrying out the work of this Agreement, Gilmartin shall not discriminate against any person because of race, creed, color, national origin, age, sex, sexual orientation, disability, religion or other legally protected status. The City of Oak Ridge encourages the utilization of minority and women-owned businesses in its contracting and subcontracting projects and Gilmartin is encouraged to actively solicit the participation of these businesses. Gilmartin shall inform all of its subcontractors and vendors providing work or services under this Agreement of this requirement and shall ensure compliance therewith.

7. INDEMNIFICATION

Gilmartin hereby agrees to protect, indemnify and hold harmless the City and TVA from and against any and all loss, expense, damage, charges and costs (including court costs and counsel fees) (collectively referred to as claims) for injury to or death of persons and injury to or destruction of property suffered or alleged to have been suffered as a result of any act or omission on the part of Gilmartin or others whose services are engaged by Gilmartin or anyone directly or indirectly employed or controlled by either of them in the course of the performance of the work provided for in this Agreement, except such injury, destruction or death as may be caused by the sole negligence or fault of the City.

Gilmartin shall bear all expenses incurred by the City, its agents, officials, and employees, in defending all claims and action for damages arising out of the foregoing claims and shall pay all judgments that may be rendered in such actions, except where the proximate cause of such claims was the sole negligence of the City, its agents, officials, or employees.

Gilmartin shall defend and save harmless the City from all claims for material furnished or work done and shall promptly discharge the same and not suffer any mechanics or other liens to remain outstanding against any of the property used in connection with the work. Furthermore, Gilmartin shall, on request, furnish satisfactory evidence that all persons who have done work have been fully paid. The City reserves the right to withhold from moneys due to Gilmartin sufficient sums to satisfy all such claims. If after written notice from the City Gilmartin fails to satisfy such claims, the City may adjust and pay the same upon a fair and reasonable basis out of any withheld funds.

The limits of insurance required in this Agreement shall not limit Gilmartin's obligations under this section. The terms of this section shall survive the termination or suspension of this Agreement.

8. LICENSING AND PERMITS

Gilmartin is responsible for obtaining any and all required permits, licenses or other documentation, which are needed to perform the work or service provided for in this Agreement.

9. ASSIGNMENT

Gilmartin is authorized to retain the services of such other subcontractors as needed to complete the project, including but not limited to contracting with the other team members for this Project as well as contractors to complete the whole-home deep energy retrofit upgrades. Gilmartin shall be responsible for payment of all fees and expenses charged by said subcontractors. Copies of all purchase and subcontract agreements are to be provided to the City and/or TVA upon request.

Gilmartin shall ensure all subcontractors meet the subcontracting requirements set forth in the contract between TVA and the City (Exhibit B), including but not limited to insurance requirements.

10. INDEPENDENT CONTRACTORS

The parties acknowledge that the relationship created under this Agreement is that of independent contracting parties and this Agreement does not create a general agency, joint venture, partnership, employment relationship or franchise between the parties. Neither party shall represent itself to be an agent of the other, nor shall it execute any documents or make any commitments to any contractual or other obligations with third parties.

11. TERMINATION

- A. This Agreement or any task hereunder may be terminated in whole or in part by the City:
1. Whenever Gilmartin shall default in performance of this Agreement and fails to cure the default within such time period (if any) required by the City after receiving a notice specifying the default; or
  2. Whenever, for any reason, the City determines that such termination is in the best interest of the City; or
  3. Whenever, for any reason, TVA has terminated the contract with the City for grant funds for the Project.
- B. Termination shall be effected by delivery of a notice of termination to Gilmartin by the City, specifying the reason for termination (above) and the date upon which such termination becomes effective. If, after a notice of termination for default it is determined that Gilmartin was not in default, the notice of termination shall be deemed to have been issued under Section 11.A.2. above and the rights and obligations of the parties hereto shall in such event be governed accordingly.
- C. Upon termination for default, Gilmartin shall be liable to the City for any and all rights and remedies provided at law or equity.
- D. After receipt of a notice of termination, and except as otherwise directed by the City, Gilmartin shall follow the reasonable direction of the City with respect to such matters as transferring property, designs, and work in progress; terminating subcontracts and orders; and completing performance.
- E. If this Agreement is terminated, Gilmartin will be entitled to payment for all services

satisfactorily performed prior to the effective date of termination, provide such services are reimbursable to the City from TVA.

- F. The City will have no liability to Gilmartin for any cause whatsoever arising out of, or in connection with, termination including but not limited to lost profits, lost opportunities, and resulting change in business condition.

12. TVA'S RIGHTS AND REMEDIES

All rights and remedies of TVA as provided in the contract between TVA and the City for this Project (Exhibit B) remain in effect and are a part of this Agreement as if fully set forth herein. Gilmartin shall impose upon all subcontractors the commercial and technical requirements specified therein to the extent applicable.

13. GOVERNING LAW

This Agreement is governed by the laws of the State of Tennessee.

APPROVED AS TO FORM AND LEGALITY:

CITY OF OAK RIDGE, TENNESSEE

\_\_\_\_\_  
City Attorney

\_\_\_\_\_  
City Manager

GILMARTIN ENGINEERING WORKS, INC.,

\_\_\_\_\_  
Gary Gilmartin, President

\_\_\_\_\_  
(Already on File)  
Tax ID Number

Attachments: Exhibit A – Proposal dated February 2, 2016  
Exhibit B – Contract between City and TVA

Approved by Resolution \_\_\_\_\_



**Proposal to the City of Oak Ridge to provide  
Owner's Agent Support to execute the  
Oak Ridge Extreme Energy Makeover Project**

**Gilmartin Engineering Works  
40 New York Ave STE 201  
Oak Ridge, TN**

**A Service Disabled Veteran Owned Small Business**

**President: Gary Gilmartin  
Phone: 865-272-3235**

**Date Submitted: February 2, 2016**

**Proprietary Information Notice:**

This proposal or quotation includes data that shall not be disclosed outside the City and shall not be duplicated, used, or disclosed in whole or in part for any purpose other than to evaluate this proposal or quotation. This restriction does not limit the City's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in all sheets.

## **Owner's Agent Services for the City of Oak Ridge Extreme Energy Makeover Project**

Gilmartin Engineering Works, Inc. is pleased to provide the following proposal for Owner's Agent support services to the City of Oak Ridge Electric Department (CORED). We are uniquely positioned to provide excellent support services in a cost effective manner.

### **1 Statement of Qualification**

Gilmartin Engineering Works (GEW) has a president with over 30 years of technical experience in the nuclear field as well as a staff with proven success in quality assurance, supply chain development, procurement engineering, standards compliance, and program management. Our company is founded on the principle of certainty. Key synonyms of certainty are assurance, confidence, doubtlessness, positivity, satisfaction, and surety. Each of these words represents GEW's commitment to our products and clients.

Gilmartin Engineering Works was formed to promote and expand domestic suppliers in the energy and manufacturing industry. We have experience in multiple sectors and have a key focus on supporting the Department of Energy (DOE), commercial nuclear energy and the Department of Defense (DoD). With over 80 years of combined experience in operations and construction in the energy industry, we have a strong personal network and extensive knowledge base.

GEW is a Service Disabled Veteran Owned Small Business (SDVOSB) based in Oak Ridge, TN, that specializes in commercial and Federal energy services support; environmental and planning consulting services; program and project management; and technical and administrative support services.

Gilmartin Engineering Works will provide the necessary access to resources to meet the services and deliverables outlined in the contract between Tennessee Valley Authority and Oak Ridge Electric Department for Extreme Energy Makeovers Project ("EEM").

Specific qualifications include in-depth knowledge of construction project management including development and evaluations of programs, as well as, execution. Our staff is acutely aware of the evolving expectations related to EEM. GEW is exclusively qualified as a local based company with an intimate knowledge and understanding of contractors within Oak Ridge. GEW has been an integral part of the grant starting in 2012 through the development of the original proposal to TVA.

Our approach to the proposed scope of work is to use our corporate experience and leadership to provide basic services, and our extensive network and reach back to provide the breadth of expertise in the key functional areas needed such as civil, software, electrical and mechanical components.

### **2 Resumes**

Attached are resumes for the Program Manager and Project Manager, as well as, our Project Engineer.

Program Manager	Key Experience
Gary Gilmartin	As President of Gilmartin Engineering Works and Vice President for Longenecker & Associates, he applies his professional expertise and a unique combination of experience in management, energy systems and business development to solve complex problems and support the energy and nuclear business sector. Possesses 30 years of experience in Nuclear Operations, Engineering, and Quality Assurance including completing Naval service achieving rank of Lieutenant Commander and qualifying for command of a Trident Nuclear Submarine. He currently serves on the ASME NQA-1 engineering and procurement subcommittee.
Project Manager	Key Experience
Todd Gilmartin	A skilled Strategic Planning and Constructability Engineer. Served as the lead for the Mixed Oxide Fuel Fabrication Facility (MOX) planning team, he achieved all corporate objectives within budget and schedule. His experience includes work with CB&I Project Services in Aiken, South Carolina. He earned his BS in Construction Management at Georgia Southern University.
Project Engineer	Key Experience
Anna Tourville	As a key member of the proposal writing team to win the TVA grant, Ms. Tourville provided technical input regarding benefits of energy efficiency improvements, as well as, the costs for implementing these upgrades. Ms. Tourville also helped develop a cost estimate to ensure all requirements of the grant would be fulfilled. Her experience covers a broad spectrum and ranges from the design of a green storm water conveyance system for the city of Townsend, TN, to serving as the integration specialist in the development of a Standard Operating Practices handbook for Federal Project Directors within the US Department of Energy. She received a Bachelor of Science in Civil Engineering from the University of Tennessee and is currently pursuing her professional engineering certification.

### 3 Scope

Gilmartin Engineering Works will execute all areas and objectives outlined in the contract between the Tennessee Valley Authority and the City of Oak Ridge Electric Department for the Extreme Energy Makeover Project ("EEM") including:

1. Deliver electric energy usage (kilowatt hour) reductions per home of at least twenty-five percent (25%) through whole-home, deep energy retrofit efforts using the energy savings tool provided by TVA;
2. Complete implementation of projects at a cost of \$10.00 per square foot for the project as a whole (not to exceed a deviation of 15%); and these six areas:
  - Awareness and Education
  - Participation
  - Home Audits
  - Retrofits
  - Program Oversight
  - Savings

Exceptions to the above scope are the purchasing of the bulk procurement items, which will be performed by CORED.

#### 4 Cost and Assumptions

Total execution cost for the Extreme Energy Makeover is \$2,947,388. It is assumed that the breakdown of this total is as follows:

Item	% of Total Budget	% Breakdown	Cost
<b>Installation/Retrofits:</b>	<b>75%</b>		<b>\$2,210,541.00</b>
-Labor/Contractor:		54%	\$1,188,924.60
-Audits (In labor):		6%	\$137,400
-Bulk Materials:		40%	\$884,216
<b>Other Contract Areas:</b>	<b>25%</b>		<b>\$736,847</b>

Detail breakdown of assumptions are as follows:

Scope Area	Task Name	Duration and Level of Effort Assumptions
Awareness & Education	Communication Plan	Assumes once during project startup. Review by management with most work and comments resolved at Project Manager level. Due February 29.
	Education & Outreach Plan	Assumes once during project startup. Review by management with most work and comments resolved at Project Manager level. Due February 29.
	Community Meetings	More presentations at startup in first six months; 2 people at each meeting (one to present and other to assist in applications) at four community meetings
	Web Presence	Will last duration of the project; estimate based on administrative support and direct costs.
	Public Service Announcements	Will last duration of the project with more up front. Relying on radio and news free publications.
	Leave-behind Info Packets	Assumes one-time creation of templates during project startup, then must be customized for equipment in each of 229 homes; ODCs. Assumes CORED does reproduction and team specific information
	Designated EEM Call Numbers	Includes answering phone calls, which could require considerable time (10 MIN PER CALL). Estimate some time for Project manager and then direct cost of a dedicated line.

Awareness & Education	Engage Additional Non-Profits	Conversations and meetings to obtain buy-in with all Oak Ridge non-profit and community groups
	Group Presentations	First six months more than remaining 12. Same target groups as above.
	Branding and Logos	Requires most effort at startup; Estimate ODCs including logo development t-shirts etc.
	Success Stories	Duration of the project; TV desires at least quarterly success stories.
Participation	Participation Criteria	Completed during project startup.
	Create Application	Required at startup
	Finish the GIS Overlays	Required at startup. City to provide
	Application Assistance	Duration of the project; Estimate 1 hr per application by team partner.
	Application Process Defined	Required at startup team effort.
	Pre walk-down	Estimate 2 hrs per house city function
	Homeowner agreement	Creation of document and approval
Home Audits	Pre-audit Blower Door Test	Fixed price \$300 per house
	Post-audit Blower Door Test	Fixed price \$300 per house
Program Oversight	Monthly Reports to TVA	Estimate assumes fixed hours per month for 18 months
	Quarterly Customer Feedback	Duration will be once per quarter (assume six quarters over 18 months/)
	Monthly Program Management Metrics	Estimate includes setting up the metrics and the producing them with periodic reports.
	Resource Loaded Schedule	Completed during startup but tweak as project progresses; Estimate 40 for creation and monthly maintenance.
	Risk Management Plan	Completed during startup as part of the project management plan.
	Project Controls	Duration of project. Part of TVA required accrual reporting.
	Contractor Oversight	Duration of project. Includes performance and sufficiency of contractors. Possible retraining or selection of new contractors.

Program Oversight	Periodic Meetings with TVA	Estimated on a quarterly basis
	Final Report to TVA	120 hrs but the report content is not defined.
	Records Archived	Ongoing effort with more at project closeout.
	Invoicing to TVA	Assumes 15 min per house / 1 hour per house
	Small Business Subcontracting Plan	Estimate most effort during startup. Small cost but important aspect for Oak Ridge based businesses.
Savings	Selection of Retrofit Items	Estimated on a per unit basis with 8 hrs each evaluation
	Deemed Energy Savings Reports	Estimated on a per unit basis with 8 hrs each report generation
	Pre-/Post-Installation Electrical Data	Estimated on a per unit basis with one hour for each
	Optimization Program	Most effort estimated to compile summary, as information can be gleaned from internal docs.
Retrofits	TVA-approved Project Manual	Required at project startup
	Develop Subcontracts for City	Required at startup.
	Negotiate/Make Bulk Procurements	Assumes 2 weeks support but CORED will do procurements
	Payout of Bulk Procurements	Direct Cost for Materials CORED
	Proposal/Bid Evaluation and Contractor Selection	Assumes 128 hrs total for 5 contractors initially
	Work Order Creation / Evaluation / Issuance	Assumes 4 hrs per house
	Set up QCN Contractor Training & Institute	Assumes 9 hrs to Set-up & schedule and 1 week to attend
	Retrofit Installations (pay contractors)	Labor/Contractor Costs
	Maintenance Agreements	Assumes 500 per house (250 per year) for two required years
	City Follow-up on Permits	Assumes 1.5 hrs/house

Upon request, a detailed breakdown of task execution costs detailing partnership spending percentages can be provided.

Assumptions:

- GEW acting as an owner's agent assumes no requirement for bonding.
- In order to adhere to schedule requirements, GEW assumes, at a minimum, a Notice to Proceed will be granted by February 10, 2016.
- GEW assumes a pay-when-paid arrangement with its subcontractors, but would prefer a line of credit with CORED to more promptly pay subcontractors.
- GEW proposes to perform all aspects stated above for \$2,063,172 with a contingency of 3.5% (\$72,212) and the option to reallocate this contingency funding as necessary to achieve all objectives required. Should the contingency not be required towards the original 229 homes, it will allow energy upgrades to be performed on up to eight additional homes.

## 5 Insurance Coverage

Gilmartin Engineering Works has appropriate liability and workman's compensation insurance. Contractors will be required to carry insurance as required by the TVA contract.



## Gary M. Gilmartin

### EXPERIENCE SUMMARY

As President of Gilmartin Engineering Works and Vice President for Longenecker & Associates, he applies his professional expertise and a unique combination of experience in management, energy systems and business development to solve complex problems and support the energy and nuclear business sector. Possesses 24 years of experience in Nuclear Operations, Engineering, and Quality Assurance including completing Naval service achieving rank of Lieutenant Commander and qualifying for command of a Trident Nuclear Submarine. He currently serves on the ASME NQA-1 engineering and procurement subcommittee.

### APPLICABLE EXPERIENCE

#### Relevant Oak Ridge Experience:

- Lead for an Oak Ridge energy program ([www.energyoakridge.com](http://www.energyoakridge.com)) for the department of energy. Successfully brought new energy companies and investments to Oak Ridge.

#### Construction and Quality Assurance Expertise:

- Lead QA Manager for the HEUMF project during the resumption of work after an extended quality stand own.
- Member of the NQA-1 standards writing committee, lead auditor qualified and expert in military, DOE and commercial QA programs.
- Mechanical lead for construction of a Trident nuclear submarine including construction, system turnover and startup. Key member on interface with shipyard QA and test engineers.
- Experience with fossil power plant major upgrades including major piping and system upgrades and startup.

#### Military Experience:

- Twenty years of progressive experience in military operations and maintenance.
- Managed a 240,000 man-hour equipment upgrade period, successfully completed 10 days early. Coordinated and executed nuclear logistics operations for a complete on and off load of Trident II missiles.
- Coordinated with government contractors to ensure the on time completion of a three month long 75,000 man-day maintenance availability.

### DETAILED EXPERIENCE

#### President, Gilmartin Engineering Works/ Vice President Longenecker & Associates

October 2010 – Present

*Oak Ridge, Tennessee*

- Owns and manages a Service Disabled Veteran Owned Small Business providing services and support to the energy industry.
- Vice President for Longenecker & Associates Inc., an international consulting company specializing in management, engineering, energy, environmental, business and regulatory issues.

#### Director of the Oak Ridge Energy Corridor, Community Reuse Organization of East Tennessee

2009 – October 2011

*Oak Ridge, Tennessee*

- Led the Tennessee Valley Nuclear Energy Coalition (TVNEC), an initiative of the Tennessee Valley Corridor. The Coalition's focus was the job creation potential from the growth of the nuclear industry in the United States, particularly in the nation's southeast region. Focus areas for this initiative were: Heavy Steel Forging and Fabricating, Supply Chain Development and Small Modular Reactors (SMR).
- Supported the Department of Energy as the Oak Ridge Lead for the Asset Revitalization Initiative implementation as the Oak Ridge Energy Corridor.
- Developed a regional, sustainable energy strategy for the Oak Ridge region. The plan: Supports development, demonstration and commercialization of solutions to America's energy challenges; assists area local governments and economic development organizations in attracting energy related businesses to the region; and coordinates activities and programs that support existing U.S. energy missions and helps bring new missions to the state and federal organizations in the region.
- Key projects in development and planning include a small modular reactor, a demonstration scale integrated solar combined cycle plan, an integrated transportation system and a smart micro-grid with demonstration scale energy storage.
- Identified and assembled teams to execute these key energy projects through partnerships and consortiums.

**Business Development Director, Oak Ridge National Laboratory (ORNL) Liaison, B&W Y-12 National Security Complex (Y-12)**

2008 – 2009

*Oak Ridge, Tennessee*

- Business Development Director for Work for Others program, growing nonproliferation work and national security mission work for the NNSA.
- First ORNL Laboratory Liaison for Y-12 National Security Complex.
- Responsible for business development and strategic planning for future mission areas.
- Identified, hired and trained a high quality business development team to accomplish growth goals.
- Established a presence in Huntsville, AL through a new partnership office that includes ORNL, Savannah River National Laboratory and Y-12.
- Designed and implemented a Customer Relations Management System.
- Implemented new and effective processes and strategies to accelerate growth in emerging missions that are now a significant portion of the ongoing work at Y-12.

**Quality Engineering Manager, B&W Y-12 National Security Complex (Y-12)**

2007 – 2008

*Oak Ridge, Tennessee*

- Responsible for the Y-12 Quality Assurance Program.
- Responsible for the Weapons Quality Assurance Program, Quality Engineering and Statistical Applications for Y-12.
- Mentor in the Y-12 Mentor Protégé program developing small businesses strengths to serve the Department of Energy.
- Managed a complex quality assurance upgrade project to ensure lessons learned are incorporated in all project activities.

**Acting Project Quality Assurance Manager, Highly Enriched Uranium Materials Facility (HEUMF), B&W Y-12 National Security Complex**

2007

*Oak Ridge, Tennessee*

- Led the QA recovery efforts for the resumption of construction activities of the HEUMF Project.
- Revised the quality assurance plan to be compliant to the Nuclear Quality Assurance Standard (NQA-1), in addition to the additional requirements imposed by a revision of the DOE Quality Order 414.1.
- Organized and trained a new project QA team and performed a full audit and requalification of the project suppliers, implementing a surveillance program for in-process work and verifying a full review of quality requirements and flow down in the project supply chain.

**Supervisor, Independent Assessments, B&W Y-12 National Security Complex**

2004 – 2006

*Oak Ridge, Tennessee*

- Led a group of six senior engineers to review complex nuclear operations and systems.
- Qualified Lead Independent Assessor and NQA-1 Lead Auditor.
- Recognized by the Defense Nuclear Facilities Safety Board, National Nuclear Security Administration and Office of Oversight for an outstanding assessment program.
- Selected for special assignments to assist Y-12 in project quality improvements.

**Supervisor of Boiler Optimization, Applied Synergistics (now Diamond Power, a Division of Babcock and Wilcox)**

2000 – 2004

*Lynchburg, Virginia*

- Responsible for engineering and management of power plant optimization projects as well as the implementation of the company's quality assurance program.
- High degree of interaction and coordination with contractor personnel, company managers and project engineers.
- Developed technical specifications for engineering, construction, testing, and startup of the company's projects.
- Developed new product lines including a real-time boiler tube life analysis system, a heat transfer sensing system for coal-fired boilers, and an artificial intelligence based program using genetic artificial intelligence algorithms for boiler control.
- Authored and implemented internal working instructions and customized database for all project tracking including proposals, technical specifications, purchase orders and reports.
- Recognized by supervisors for completing assigned projects ahead of schedule during a year with a 20% increase in revenue with no increase in personnel resources.
- Experienced in contract negotiation including scope and terms and conditions.
- Proficient in computer programming, control system development, database applications, Microsoft Office applications, Microsoft Project, and AutoCAD.

**Submarine Group Strategic Weapons Department Head, U. S Navy**

1998 – 2000

*Kings Bay, Georgia*

- Oversight responsibility for safety compliance and operational proficiency of 20 submarine nuclear weapons departments.
- Supervised over 40 nuclear trained engineers.
- Training Manager recognized for best training of 12 DOD facilities on east coast and twice awarded for mentoring and qualification of over 20 department heads.
- Full responsibility for nuclear quality assurance, nuclear weapons safety, nuclear weapons RADCON, and the Human Reliability Program for Submarine Squadron Sixteen in Kings Bay, GA.

- Represented Submarine Squadron Twenty during Department of Defense nuclear weapons surety inspections and Strategic Arms Reduction Treaty inspections.

**Nuclear Submarine Strategic Weapons Department Head, U. S. Navy**

1994 – 1998

*Kings Bay, Georgia*

- Responsible for readiness and operation of Trident II Submarine Strategic Weapons System.
- Ensured 100% operations readiness for three years on the complex mechanical, fluid and electrical missile launch system with personnel shortages as high as 30%.
- Managed a 240,000 man-hour equipment upgrade period, successfully completed 10 days early.
- Coordinated and executed nuclear logistics operations for a complete on and off load of Trident II missiles.
- Planned and supervised 12 shutdown maintenance periods.
- Designed and executed the ship's weapons quality assurance and surveillance program.
- Served successfully as Human Reliability Program Certifying Officer.

**Operations Manager and Training Manager for S5G Nuclear Plant, Idaho National Engineering Laboratory (INEL) - U. S. Navy/Westinghouse Corporation**

1991 – 1994

*Idaho Falls, Idaho*

- As Operations Manager, controlled nuclear maintenance, chemistry and radiological controls, increasing plant availability by 30%. Twice awarded medals for outstanding plant performance
- Represented the Naval Reactors branch of INEL in national process improvement conference with Admiral Demars – Director, Naval Reactors.
- Devised a revolutionary operational training and monitoring program including intensive monitoring and auditing. Result: Zero significant incidents, perfect safety record, and three grade level improvement in certification rating over two years.

**Nuclear Power Plant Operations/Maintenance Supervisor and Engineer, U. S. Navy**

1987 – 1991

*Groton, Connecticut/Kings Bay, Georgia*

- Developed and executed a comprehensive quality control program for the construction and maintenance of over 300 nuclear and conventional submarine systems for three years.
- Served as a testing and startup engineer for the USS Pennsylvania, Trident Submarine.
- Reviewed and approved more than 2000 work packages and certified 50 quality inspectors earning recognition as best out of eight by independent auditors.
- Coordinated with government contractors to ensure the on time completion of a three month long 75,000 man-day maintenance availability.
- Developed and administered dynamic audit/monitoring program of in-process work control resulting in record low amount of re-work and record high reliability.

**Naval Nuclear Power Plant Reactor Operator and Instructor, Nuclear Power Training Unit, U. S. Navy**

1980 – 1983

*Schenectady, New York*

- Qualified Reactor Operator for the S8G Trident nuclear power plant.
- Certified Quality Control Inspector and Electronics Technician specializing in soldering and nuclear grade electronics equipment.
- Test Supervisor for complex reactor dynamics testing to develop standard submarine operating and casualty procedures for use in the Trident fleet.



Gary M. Gilmartin

**EDUCATION**

Masters of Business Administration, Brenau University

Certified Nuclear Propulsion Plant Supervisory Engineer, U.S. Naval Reactors Program

Graduate Level Nuclear Engineering, Navy Nuclear Power School

B.S. Electrical Engineering (BSEE), University of Texas, High Honors



## Todd E. Gilmartin

### EXPERIENCE SUMMARY

Gilmartin is a skilled Strategic Planning and Constructability Engineer. As the lead for the Mixed Oxide Fuel Fabrication Facility planning team, he achieved all corporate objectives within budget and schedule. His experience includes work with CB&I Project Services in Aiken, South Carolina. He earned his BS in Construction Management at Georgia Southern University. Gilmartin possesses specific skills in Smart Plant, Microsoft Access, and other data management tools. He has unique expertise in nuclear glovebox systems installation and operations.

### APPLICABLE EXPERIENCE

- Gilmartin Engineering Works, Project Manager (Oak Ridge, TN) February 2016 to Present.
- CB&I Project Services (Aiken, SC) —Strategic Planning/Constructability Engineer, Jan. 2012 to December 2016.

**Plan, Support, and Control Construction Activities, Concentrating on Mechanical and Electrical Installations by:**

- Convey and track project status by developing/updating project schedules, project managers, & construction managers.
- Review and interpret engineering drawings, specifications, industry standards, and procedures to produce detailed assembly instructions and beneficial construction methods.
- Plan and Control work through developing, maintaining, managing work packages, procedures and templates.
- Perform field walk downs and inspections during construction and assembly to ensure conformance with design requirements, DOE codes/standards and nuclear project procedures.
- Prepare field change requests and field change notices to identify construction issues and communicate proposed solutions to correct problems and improve cost savings.
- Create, program, manage, and maintain databases of installed components for turnover and status updates.
- Develop work plans for the installation of plant items including Electrical Distribution Equipment (13.8KV, 4.16KV, 480V, 240V, & 120V), Nuclear Process Equipment/Gloveboxes, and Civil Items, resulting in schedule adherence and milestone achievement.
- Perform assessments of installation techniques for constructability, process improvements, cost improvements, and safety benefits.
- Develop key performance index reports utilizing project databases.

### Project Experience:

- U.S. Department of Energy Project (Jan 2012 to Present) Budget: \$7.7B
- Mixed Oxide Fuel Fabrication Facility is a first-of-its-kind facility. The plant is a key component of the National Nuclear Security Administration's (NNSA) program to dispose of surplus weapons-grade plutonium. It will be capable of converting 34 metric tons of weapons-grade plutonium into MOX fuel assemblies for use in commercial nuclear power plants. The project is setting new standards in safety with a record of over 20 million safe man hours.

- City Hall Municipal Building Developed a Bid Submittal by estimating, modeling, planning, & scheduling all aspects of the project.
- Georgia Southern University Building Developed Building Information Model (BIM) to gain working knowledge of Autodesk programs.
- Steel Structure Managed the construction of structural steel components and upon completion performed inspections for completeness of the entire assembly.

**Certifications:**

- OSHA 10 & 30 Hour Safety Certification
- Safety Conscious Work Environment for Managers Training
- Lockout/Tagout Training: Control of Hazardous Energy    Confined Spaces Training
- Fall Protection Training
- Material False Statements & Signatures Training
- Earned Value Management Training

**EDUCATION:**

GEORGIA SOUTHERN UNIVERSITY (Statesboro, GA) — BS in Construction Management, 2011



## Anna M. Tourville

### EXPERIENCE SUMMARY

Anna was a key team member in the development of the NA-AMP's Federal Project Director PM Handbook. She was also the integration specialist in the development of NA-APM Standard Operating Practices for Federal Project Directors for NA-APM. During the development and editing of the handbook and SOPs, she helped ensure all drafts were written in accordance with DOE O 413.3B. Prior to the NA-APM task, Anna performed the design of a green stormwater conveyance system for the city of Townsend, TN. Anna has a Bachelor of Science in Civil Engineering and is currently pursuing her professional engineering certification

### DETAILED EXPERIENCE

#### Longenecker & Associates

2013-Current

- **Waste Isolation Pilot Plant Conceptual Design Report**

March 2015- Current

Key member in the development of the conceptual design report for the new underground ventilation system.

- Assisted in the development of over more than 40 project documents for two project alternatives (i.e., project execution plan, acquisition strategy, risk management plan, NEPA and environmental compliance)
- Managed document revisions and configuration control
- Provided technical support to the M&O project manager during DOE EM headquarter/CBFO review

- **Subtask Lead, Project Management Processes and Best Practices**

2014-Current

- Responsible for leading the effort to define functional areas that are essential to executing a successful project within NA-APM.
- Provide training and additional documents to the identified leads

- **Project Engineer, Federal Project Manager Tools Development and Deployment Task Order**

2013-2014

Key member in the development of the Federal Project Director Project Management Handbook and NA-APM Standard Operating Practices (SOPs).

- Provided technical reviews and edits of all the documents produced.
- Technical reviews focused on ensuring the SOPs and Handbook were compliant with DOE O 413.3B and the new NA-APM CONOPS.
- Assisted the template and design of the SOPs and Handbook.
- Assisted with monthly progress and budget reports for the client.
- Final edit and formatting of FPD Handbook

- **ECMS Contract Management**

2013-Current

- Tracks spending on each ECMS task to ensure compliance with scope agreements
- Produces target monthly budgets for tasks

**Project Engineer/Engineering Intern – Gilmartin Engineering Works**

2013-Current

- Analytical (numerical and cost) reports
- Conceptual Designs
- Contract Management assistance
- Proposal Development

**City of Oak Ridge’s TVA Extreme Energy Makeover Proposal**

2014-2015

She was a key member of the proposal writing and editing team to win TVA grant money. The grant money will renovate Manhattan Project Legacy Homes to increase their energy efficiency. The proposal covered the technical benefits of energy efficiency as well as the costs for implementing these upgrades. Anna helped develop a cost estimate to ensure all requirements of the grant would be fulfilled.

**Townsend Stormwater Management**

August 2013-December 2013

- Worked on a three person team to design a green stormwater system for Townsend, TN
- Estimated volume of runoff during potential storms
- Calculated the sizes of bioswales based of runoff quantities calculated

**Undergraduate Research Assistant – University of Tennessee, Knoxville**

May-August 2012

- Wrote literary review on compost emissions versus open burning by gathering data from peer-reviewed articles.
- Prepared a comparison of emission quantities for TDOT.
- Quantified the emission reduction of composting excess material versus open burning.

**EDUCATION**

B.S. Civil Engineering, University of Tennessee, 2014

**ACTIVITIES**

Chi Epsilon-Marshall 2011-2012

ASCE Member 2012-Present

UTK ASCE Concrete Canoe Team

Contract for Extreme Energy Makeovers Project

**Contract**

Between Tennessee Valley Authority

and

City of Oak Ridge, Tennessee

for

Extreme Energy Makeovers Project ("EEM")

TVA Contract Number

11079

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This CONTRACT, between the City of Oak Ridge, Tennessee, a municipal corporation (“Contractor”), and Tennessee Valley Authority, a corporate agency and instrumentality of the United States government (“TVA”), is dated as of February 8, 2016 (the “Effective Date”). Contractor and TVA are “parties” and each is a “party” to this Contract.

The parties agree as follows:

## **1. Definitions**

### **1.1 Application of Defined Terms (101)**

- a. Words and terms defined in this section shall have the same meaning throughout all parts of this Contract. Where intended to convey the meaning consistent with that set forth in its definition, a defined word or term is marked by initial capitalization. Technical specifications, if any, may define additional words and terms where necessary to clarify the Work. Unless otherwise stated in this Contract, definitions set forth in the technical specifications shall apply only within the technical specifications.

### **1.2 Defined Terms (102)**

- a. “Acceptance” means receipt by TVA of Work meeting the Contract requirements and acknowledgement by an authorized representative of TVA that such Contract requirements have been met.
- b. “Applicable Laws” means those federal, state, and/or local laws, regulations, ordinances, judicial or administrative decisions or injunctions, or any other legal pronouncements having the force or effect of law, which are applicable to the performance of the Work (as defined below), TVA, or the locations at which the Work will be performed.
- c. “Contract” means this Contract and all Exhibits, Attachments, Work Releases, and Specifications attached hereto, as the same may be amended from time to time.
- d. “Contracting Officer” means the individual assigned by TVA to have authority over this Contract, including the authority to authorize changes and amend this Contract, terminate this Contract, seek remedies for nonperformance including termination, and otherwise act on behalf of TVA for all purposes and in all matters regarding this Contract.
- e. “Contractor’s Representative” means the individual designated by the Contractor in writing to have authority over this Contract, including the authority to agree to amendments of this Contract, and otherwise act on behalf of the Contractor in all matters regarding this Contract.
- f. “Contract Technical Steward” or “CTS” means the individual or individuals assigned by the Contracting Officer to assist the Contracting Officer in technical matters under this Contract. The CTS has no authority to modify this Contract or to issue direction contrary to this Contract. The CTS may authorize designees for specific purposes.

- g. "Proper Invoice" means a numbered and dated invoice, certified by Contractor's Representative, containing the TVA Contract number and itemized by the line items as detailed in this Contract and including purchase order number, work authorization document number and type, payment terms, description of Work being billed, quantities, unit prices, rates, extended amounts and supporting documentation as required by TVA.
- h. "Credit" means the amount(s) of any adjustment, allowance, income, payment or re-payment, rebate, refund, or other credit, including any accrued interest on such amount(s), owed, and payable by Contractor to TVA.
- i. "Work" means the total of all actions, products, management, services, materials, documentation, electronic programs, reports, testing, transport, administration, tools, equipment, items and responsibilities to be furnished or performed by the Contractor under this Contract, together with all other additional necessities that are not specifically recited in this Contract, but can be reasonably inferred as necessary to complete all obligations and fully satisfy the intent of this Contract.
- j. "Work Release" means a TVA Purchase Order, Contractor Work Authorization (CWA), a Task Assignment Order (TAO), a Project Authorization (PA), a Project Work Authorization (PWA), a Change Order, or other document issued by TVA authorizing specific Work to be performed or adjustments to prior Work Releases.
- k. "Site" means any property on or to which TVA has any property interest (including, without limitation, ownership or lease, license, or easement rights).

## **2. Work Scope/Deliverables**

### **2.1 Work Scope/Deliverables (201)**

Contractor agrees to provide the Work as detailed in Attachment A, which is incorporated herein by reference.

## **3. Term and Termination**

### **3.1 Term of Contract and Dates of Performance (302)**

- a. The term of this Contract shall begin on its Effective Date and be in force through completion of all Work, Acceptance and final payment, including resolution of all disputes, claims, or suits, if any. Termination or expiration of this Contract shall not affect the parties' obligations, such as warranty obligations, which by their nature survive termination or expiration. Contractor shall commence work on the date established by TVA. The Work to be performed hereunder shall be completed no later than September 30, 2017. The project's final deliverables shall be received by TVA within 6 weeks of the final home retrofit. The date for the final home retrofit report shall be determined by TVA and is scheduled to occur no later than November 17, 2017.

### **3.2 Termination - Tasks or Services (304)**

- a. This Contract or any task hereunder may be terminated in whole or in part by TVA:

1. Whenever Contractor shall default in performance of this Contract and fails to cure the default within such time period (if any) required by the Contracting Officer after receiving a notice specifying the default; or
  2. Whenever, for any reason, TVA determines that such termination is in the best interest of TVA.
- b. Termination shall be effected by delivery to Contractor of a notice of termination (“Notice of Termination”) specifying whether termination is for the default of Contractor or for the convenience of TVA and the date upon which such termination becomes effective. If, after notice of termination of this Contract for default under subsection a.1 above, it is determined for any reason that Contractor was not in default pursuant to subsection a.1 above, the Notice of Termination shall be deemed to have been issued under subsection a.2 above, and the rights and obligations of the parties hereto shall in such event be governed accordingly.
  - c. Upon a termination for default, Contractor shall be liable to TVA for any and all rights and remedies provided at law or in equity.
  - d. After receipt of a Notice of Termination, and except as otherwise directed by the Contracting Officer, Contractor shall follow the reasonable direction of the Contracting Officer with respect to such matters as transferring property, designs, and work in progress; terminating subcontracts and orders; and completing performance.
  - e. If this Contract is terminated, TVA will be liable under the payment provisions of this Contract for Work performed and for which TVA has provided Acceptance before the effective date of termination.
  - f. TVA will have no liability to the Contractor for any cause whatsoever arising out of, or in connection with termination, including, but not limited to, lost profits, lost opportunities, and resulting change in business condition, except as expressly stated within this Contract.

## **4. Price and Payments**

### **4.1 Contract Monetary Limitation (401)**

- a. The total of payments under this Contract shall not exceed \$2,947,388. TVA does not guarantee that it will authorize Contractor to perform any minimum amount of Work. Contractor expressly understands and agrees that TVA shall not be liable for any amounts in excess of this monetary limit except pursuant to a supplement or amendment to this Contract signed by both parties.

### **4.2 Compensation (Time and Materials) (404)**

- a. Contractor recognizes and agrees that the funds committed by TVA under this Contract for the EEM project are not intended to cover the total EEM project costs that Contractor will incur.
- b. TVA agrees to pay Contractor in accordance with Attachment B – Pricing Schedule for the completion of the Work and for the provision of materials necessary to complete the Work.

- c. Contractor will not be compensated in connection with a home that does meet the minimum 25% electric energy savings, as determined by TVA in accordance with the terms of this Contract. TVA will make its determination of whether a home meets the required energy savings following Contractor's submission of the required installed measures details to the TVA's DSIMS database. TVA will review the data after submission and will notify Contractor if any homes do not achieve the required energy savings. Contractor may elect, if feasible, to return to the home to do additional work so that the home achieves the required energy savings or Contractor may perform the Work on another home. To the extent TVA has made payment for a home that does not meet the minimum 25% energy savings requirements, Contractor will promptly credit the amount of such payment(s) to TVA on the next submitted invoice.

#### **4.3 Audit Rights (433)**

- a. Contractor shall keep accurate records and books of accounts in electronic form supporting the items and costs billed under this Contract. TVA, or its agents, shall have the right to audit without restriction and at no additional cost to TVA, at any time during normal working hours, all costs incurred by Contractor and billed to TVA and may examine Contractor's records specifically relating thereto. Any payments to Contractor which are not in accordance with Contract terms or are not supported by valid evidence shall be refunded to TVA. If TVA makes an overpayment to Contractor as a result of Contractor overbillings, Contractor shall be liable to TVA for interest on the amount of such overpayment, to be computed (1) for the period beginning on the date the overpayment was made to Contractor and ending on the date Contractor repays the amount of such overpayment to TVA, and (2) at the rate or rates identified in the Prompt Payment Act.
- b. In the event Contractor errors/irregularities are discovered by audit or other means and TVA relied upon such errors/irregularities in accepting the firm fixed price(s), said rates shall be reduced accordingly, with such reduction retroactive to the effective date of the Contract and applicable amounts refunded to TVA.
- c. Contractor shall preserve all records and documents that relate to the EEM project (including records and documents in electronic form) in its possession and/or control until six years after the completion of the EEM project. Contractor shall preserve and make available its records and books of accounts, both manual and electronic, for a period of six years from the date of final payment under this Contract. If this Contract is terminated, said records shall be preserved and made available for a period of six years from the date of any resulting final settlement. Records and books of accounts which relate to litigation or the settlement of claims arising out of the performance of this Contract, or costs and expenses of this Contract to which exception has been taken by TVA shall be retained until such appeals, litigations, claims, or exceptions have been disposed of.
- d. Contractor will provide TVA timely access, but in no event more than 10 business days from TVA's request for access, to documents generated in the performance of Work hereunder including any documents required to substantiate funds expended on the EEM project.

#### **4.4 Terms of Payment (419)**

- a. Payment(s), less such discounts or deductions as are provided for in this Contract or by law, will be made by electronic fund transfer (after completing a TVA Electronic Vendor Payment Form). Payment will be made by electronic fund transfers not more than 10 calendar days after the later of (i) receipt of a Proper Invoice(s) by TVA at the office designated in this Contract for receipt of invoices or (ii) Acceptance by TVA of the Work. Separate invoice(s) must be submitted for each payment.

#### **4.5 Offsets (428)**

- a. If Contractor is in breach of any requirement of this Contract or any other contract with TVA, TVA may withhold payments that may be due to Contractor and may offset any costs incurred by TVA as a result of the breach, other damages, or monies owed to TVA against funds due Contractor under this or any contract that Contractor has with TVA.

#### **4.6 Taxes (435)**

- a. TVA is a Federal Government agency and, therefore, state sales and use taxes are not applicable to materials, supplies, equipment, or services sold directly to TVA. By entering into this Contract, Contractor certifies that no such state sales or use taxes have been included in its offer or the Contract.
- b. Contractor is responsible for payment of any other taxes it incurs in performance of this Contract, including sales or use taxes on products installed or consumed by Contractor rather than sold directly to TVA, and for taking all measures to identify and claim any available exemptions or reductions to such taxes (such as exemptions for electrical generating equipment under Tennessee Code Ann. § 67-6-209(e)). Applicable taxes should be included in Contractor's price. This shall include any applicable Federal excise taxes or duties. If subsequently enacted additions, deletions, or changes to such taxes affect Contractor's costs under this Contract, prices will be increased or decreased accordingly.

#### **4.7 Prompt Payment Act and Payment of Interest (439)**

- a. Payments to Contractor under this Contract are subject to the Prompt Payment Act, 31 U.S.C. §§ 3901-3907 (PPA), as applicable to TVA. Contractor shall pay interest on any overdue amounts owed to TVA under this Contract at the same rate(s) as payable under the PPA from the date payment was due until the date payment is received by TVA.

#### **4.8 EPA and Other Required Provisions**

- a. TVA entered into a Federal Facilities Compliance Agreement (FFCA), Docket No. CAA-04-2010-1760 with the Environmental Protection Agency (EPA) to address issues arising under the Clean Air Act. The FFCA requires TVA to implement certain environmental mitigation projects. The EEM project initiative outlined in this Contract constitutes an environmental mitigation project identified in the FFCA. You may obtain a copy of the FFCA from the EPA website, (<http://www.epa.gov/enforcement/tva-federal-facilities-compliance-agreement-matter-tennessee-valley-authority-docket-no>) or obtain such copy from the TVA authorized representative. Contractor will provide a copy of the FFCA to each subcontractor utilized to perform the Work. Environmental mitigation projects and requirements relating to such projects are covered under Section V.F. and Appendix C of the FFCA.
- b. Contractor shall provide TVA timely access to documents generated in the implementation of the mitigation project identified under this Contract, including documents to substantiate the money expended on the project. Any such information must be available to TVA in a timely manner such that its obligations under the FFCA to provide documentation to EPA can be met.
- c. Contractor will not use the EEM project or any portion thereof to satisfy any obligations it may have under other applicable requirements of law effective June 13, 2011, including any applicable renewable or energy efficiency portfolio standards.
- d. TVA shall not make any payment under this Contract until Contractor provides the information required under Paragraph 132 of the FFCA. Said information shall identify, in writing, Contractor's legal authority for (i) accepting TVA's funding for the project and (ii) conducting the project for which funding is provided.
- e. Contractor shall preserve all records and documents that relate to implementation of the mitigation project under this Contract (including records and documents in electronic form) in its possession and/or control until six years after the completion of the project.

#### **4.9 Reimbursement of EPA Fees or Fines**

- a. Contractor's failure to comply with the terms and conditions of this Contract may result in fees or fines being assessed against TVA by the EPA. If any such fines are levied against TVA, Contractor will reimburse TVA for such fines, but only to the extent caused by Contractor's failure to comply with the terms and conditions of this Contract.

## **5. Management of the Work**

### **5.1 TVA and Contractor Representatives (501)**

- a. The Contracting Officer for this Contract will be Bradley R. Wagner unless and until a different individual is otherwise designated in writing by TVA as the Contracting Officer.
- b. This Contract shall not be amended or supplemented without written consent of TVA's Contracting Officer.
- c. Contractor shall furnish all correspondence regarding this Contract to TVA's Contracting Officer. **UNLESS EXPRESSLY PROVIDED FOR IN THIS CONTRACT, ORAL NOTICE BY CONTRACTOR OR CONSTRUCTIVE NOTICE TO TVA DOES NOT FULFILL A CONTRACTOR'S NOTICE OBLIGATION UNDER THIS CONTRACT.**
- d. Where the Contracting Officer has designated one or more CTS, communications, technical documents, samples, and other materials relative to technical matters should be directed to the CTS.
  - 1. The CTS shall be Beth Parsons.
- e. Before starting Work, Contractor shall designate in writing a Contractor's Representative and shall specify any limitations of the Contractor's Representative's authority. Where such limitations are specified, Contractor shall provide the name and contact information for the person authorized to act for Contractor regarding the limitation. All Contract-related communications given to the Contractor's Representative by TVA shall be binding upon Contractor.
  - 1. The Contractor's designated authorized representative shall be Bruce Applegate.

### **5.2 Work Authorization (502)**

- a. TVA shall, at its option, establish scope of Work, funding levels, and performance periods on a program, project, or major activity basis by issuance of a Purchase Order ("PO"). POs will be developed with appropriate input from Contractor, approved by the Contracting Officer, and acknowledged by Contractor's authorized representative(s). Any performance period for individual POs shall not be exceeded by Contractor without the express authorization of the Contracting Officer through a new or revised PO.
- b. Contractor must submit a monthly invoice to TVA for compensation in accordance with this Contract for labor and materials incurred during the home retrofit process.

### **5.3 Business License (503)**

- a. Contractor, by entering into this Contract, certifies that all applicable Federal, State, and local licenses and permits required by Applicable Law have been obtained and are in full force and effect. This includes, but is not limited to, professional licenses, business licenses, and corporate licenses and certifications. Contractor shall secure and pay for all necessary permits and/or other licenses required in connection with this Contract. Contractor shall furnish copies of such licenses and permits if requested by TVA.

### **5.4 Progress (507)**

- a. Contractor shall give TVA full information in advance as to its plans for performing each part of the Work. If at any time Contractor's actual progress is inadequate to meet the requirements of this Contract, TVA may so notify Contractor who shall immediately take steps as may be necessary to improve its progress.
- b. Neither notice by TVA nor TVA's failure to issue notice shall relieve Contractor of its obligation to complete its Work in accordance with this Contract to achieve the quality of Work required by this Contract and a rate of progress necessary to meet the Contract completion date or the agreed upon schedule for completion as required by this Contract.

### **5.5 Reporting Requirements (509)**

- a. Throughout the Contract term, Contractor shall keep accurate records and submit various periodic reports as requested by TVA in Work Releases, purchase orders or otherwise in writing referencing this Contract. Such reports shall be consistent with and follow the format specified by TVA. The cost of such reports is included in the Contract pricing, and TVA will not authorize additional expenditures for such reports.

### **5.6 Subcontractor Approval and Requirements (510)**

- a. Subcontracts must include provisions to secure all rights and remedies of TVA provided under this Contract, and to the extent applicable Contractor shall impose on each of its subcontractors the commercial and technical requirements specified herein. Contractor shall be responsible for ensuring subcontractors are aware of, and abide by, those applicable provisions.
- b. Contractor shall identify any proposed subcontracts which are to be performed by either (1) foreign-based entities; (2) domestic-based entities using non-domestic workers; or (3) proposed to be awarded to any business concern or individual in any way affiliated with Contractor.
- c. Contractor shall, upon request by TVA, provide copies of all purchase and subcontract agreements (pricing may be redacted unless the compensation to be paid is reimbursable under this Contract).
- d. No subcontract will be approved which would relieve Contractor or its sureties of their responsibilities under this Contract.

## 6. Inspection

### 6.1 Inspection of Work (601)

- a. TVA may, upon reasonable prior notice to Contractor, conduct such inspection and tests as may be reasonably required to satisfy TVA that the Work conforms to this Contract. Contractor shall bear all costs incidental to any corrective action including removal, disassembly, reinstallation, reconstruction, retesting, and re-inspection, as may be necessary to correct any defect or demonstrate that the previously defective Work complies with this Contract's requirements.

## 7. TVA Furnished Items

### 7.1 Conditions of Provisioning (701)

- a. The Contractor understands and agrees that it shall be solely responsible for providing everything necessary to perform the Work and to be in full compliance with this Contract.

## 8. Indemnification and Insurance

### 8.1 Insurance (1401)

- a. Unless otherwise specified in this Contract, Contractor shall secure and maintain in effect, at all times during the performance of Work, insurance coverages with limits not less than those set forth below with insurers and under forms of policies satisfactory to TVA. Contractor shall deliver to TVA no later than ten days after execution of this Contract, and in any event prior to commencement of Work on a TVA site, a completed Certificate of Insurance, attached hereto. Contractor shall also furnish certified copies of the policies to the Contracting Officer promptly upon TVA's request.
- b. The insurance to be provided hereunder shall be written by one or more nationally reputable insurance companies authorized to do business in Alabama, Kentucky, Tennessee, Georgia, Mississippi, Virginia, North Carolina which shall be rated "A" or better by A.M. Best Company.

<u>Coverage</u>	<u>Minimum Amounts and Limits</u>
1. Workers Compensation	
Part A.	Statutory requirements
Part B. Employer's Liability	\$1 Million, statutory limits
2. Commercial General Liability	
Combined Single Limits	\$1 Million each occurrence
3. Automobile Liability (owned, hired, and non-owned)	
Combined Single Limits	\$1 Million each occurrence.
4. Professional Liability	\$1 Million

- c. Deductibles or retention amounts under the policies described above shall not exceed 5% of the per occurrence coverage limits, without the express written consent of the Contracting Officer.
- d. TVA is not maintaining any insurance on behalf of Contractor covering against loss or damage to the Work or to any other property of Contractor. In the event Contractor maintains insurance against physical loss or damage to Contractor's equipment and tools, such insurance shall include an insurer's waiver of rights of subrogation in favor of TVA, the United States, and their employees and agents.
- e. The policy of insurance which affords General Liability shall contain a provision or endorsement stating that such insurance:
  - 1. Applies to the indemnity liability assumed by Contractor under this Contract, subject to all of the terms and conditions of such insurance;
  - 2. Provides coverage for premises/operations, at least 2-year products/completed operations, and other coverages or endorsements required by the Contracting Officer.
- f. The General Liability, Automobile Liability, and Excess Liability policies provided under this Contract shall provide for Items 1 through 4. The Employer's Liability policy shall provide for item 2. Any Professional Liability (Errors & Omissions) insurance required by or pursuant to this Section will not add TVA, the U.S., their officers, agents, employees or volunteers as additional insureds.
  - 1. TVA, the U.S., their officers, agents, employees, and volunteers are added as additional insureds on a primary noncontributory basis to Contractor's liability insurance policies required by this Section (except as specifically provided herein) and with respect to any liability of additional insureds arising out of or resulting from Contractor's operations performed for the additional insureds, including, but not limited to, liability of the additional insureds for the general supervision of such operations.
  - 2. It includes an insurer's waiver of rights of subrogation in favor of TVA, the United States, and their employees and agents.

It states that it is primary, noncontributory insurance.

It contains a severability of interest clause.
- g. The requirements contained herein as to types and limits, as well as TVA's approval of insurance coverage to be maintained by Contractor, are not intended to and shall not in any manner limit or qualify the liabilities and obligations of Contractor under this Contract.
- h. Contractor shall provide at least 30 days written notice of cancellation, expirations, terminations, and material alterations of the insurance policies.

- i. Failure by Contractor or its subcontractors to provide and maintain current, valid certificates of insurance throughout the Contract performance period shall be a material breach of Contract for which TVA may exercise any rights or remedies it may have under this Contract or at law, including the right to withhold moneys due and owing Contractor hereunder. The failure of TVA to review certificates does not waive any of its rights. In the alternative, TVA may, at its sole option, accept Contractor's written certification that it or its subcontractors self-insure in accordance with applicable workers' compensation laws for all duties, liabilities, and obligations it has or may have under such laws; provided, however, that Contractor must provide to TVA satisfactory written evidence showing that its or its subcontractors' self-insurance plan(s) have been authorized by the appropriate State regulatory entity.
- j. Contractor shall require each of its subcontractors to maintain Workers' Compensation insurance at least in accordance with statutory requirements. In the event Contractor requires any of its subcontractors to provide any additional insurance, Contractor shall require that TVA, the United States, their officers, agents, employees and volunteers be named as additional insureds with respect to such insurance, and that such insurance shall provide for the insured's waiver of subrogation rights in favor of TVA, the United States, and their employees and agents.
- k. Should any of the Work:
  - 1. Be upon or contiguous to navigable bodies of water, Contractor shall also carry insurance covering its employees for benefits available under the U.S. Longshoremen's and Harbor Workers' Compensation Act or Jones Act to the extent required by law;
  - 2. Involve watercraft (27 ft. or longer) owned or operated by Contractor, liability arising out of such watercraft shall be insured by Protection and Indemnity insurance with a combined single limit not less than \$5 million each occurrence. Watercraft less than 27 ft. shall be insured under the Commercial General Liability policy. If the hull is insured, such insurance shall provide for an insurer's waiver of subrogation rights in favor of TVA, the United States, and their employees and agents;
  - 3. Involve aircraft (fixed wing or helicopter) owned or operated by Contractor, liability arising out of such aircraft shall be insured for a combined single limit not less than \$10 million each occurrence and such limit shall apply to Bodily Injury (including passengers) and Property Damage Liability. If the aircraft is insured, such insurance shall provide for an insurer's waiver of subrogation rights in favor of TVA, the United States, and their employees and agents.
  - 4. Involve design and engineering and professional services contracts, a minimum of \$5 million of Professional liability (errors & omissions) insurance should be provided. If the Professional Liability policy is written on a "claims made" policy form, Contractor shall arrange for at least two years extended discovery period (tail period) to be incorporated into the policy prior to its termination.

## **8.2 Indemnity (1402)**

- a. Contractor, by entering into this Contract, acknowledges awareness of the location, nature and hazards of such Work. As such, Contractor releases TVA, its agents and employees, from all liability for Contractor's personal injuries, property damage, or loss of life or property arising out of or in any way connected with the performance of this Contract. Contractor shall indemnify and defend TVA, its agents and employees, and save each of them harmless from any and all liability to Contractor's employees or any third parties for personal injuries, property damage, or loss of life or property resulting from or in any way connected with the performance of this Contract. However, the foregoing indemnification shall not apply to injuries or damages to persons or property the extent the proximate cause is the negligence of TVA, its agents or employees.
- b. Contractor shall bear all expenses incurred by TVA, its agents or employees, in defending all claims and action for damages arising out of the foregoing injuries, damages or losses, and shall pay all judgments that may be rendered in such actions, except to the extent the proximate cause of such injuries, damages, or losses was the negligence of TVA, its agents or employees.
- c. Contractor shall defend and save harmless TVA from all claims for material furnished or Work done and shall promptly discharge the same and not suffer any mechanics or other liens to remain outstanding against any of the property used in connection with the Work. Furthermore, Contractor shall, on request, furnish satisfactory evidence that all persons who have done Work have been fully paid. Contractor shall pay TVA the cost, including overhead, of any services or materials provided by TVA to any persons, including subcontractors, engaged in carrying out any of Contractor's obligations in connection with this Contract. TVA reserves the right to withhold from any sums due Contractor sufficient sums to satisfy all such claims. If after written notice from TVA, Contractor fails to satisfy such claims, TVA may adjust and pay the same upon a fair and reasonable basis out of any withheld funds.
- d. Contractor shall comply with Applicable Laws affecting performance of its obligations under this Contract and will indemnify and defend TVA and the United States and their officers, employees and agents, from all liability resulting from its or its employees', agents', or subcontractors' violation of such Applicable Laws. If this Contract is for Nuclear-related materials and/or services and contains a section entitled Nuclear Energy Hazards and Nuclear Incidents, nothing in this Section (Indemnity) will be construed as reducing Contractor's rights under section, Nuclear Energy Hazards and Nuclear Incidents.
- e. Contractor is a Tennessee municipal corporation. Therefore, the above indemnification provisions are limited by Tennessee law and are only applicable to the extent allowed by Tennessee law.

## **8.3 Limitations of Consequential Damages (1403)**

- a. Except to the extent consequential damages are covered by insurance maintained or required to be maintained under this Contract and except to the extent consequential damages are caused by a party's willful misconduct or intentional breach of this Contract, neither party's liability to the other party for consequential damages shall exceed \$250,000 or the Contract Monetary Limitation, whichever is greater.

#### **8.4 Patents and Copyrights (1406)**

- a. To the extent allowable by Tennessee law, Contractor hereby indemnifies and shall hold harmless TVA and their representatives from all suits, claims, actions, losses, damages, and expenses, including attorney's fees, and at its expense shall defend any suit against TVA, in so far as it is based on the claim of infringement of any patent or of any copyright, from the performance of Work.
- b. TVA shall immediately notify Contractor in writing of any such suit or claim and permit Contractor to defend same, and give all needed and available information and assistance to enable Contractor to do so.
- c. Contractor shall pay all damages and costs finally awarded therein against TVA, but Contractor shall not be liable under any compromise made without its consent. If in any such suit said invention or its utilization by TVA, Contractor, or any party on TVA's behalf is held to constitute infringement, or is otherwise determined to violate any right secured by patent or copyright, Contractor at its expense shall procure for TVA the necessary licenses and right to continued utilization of said invention; provided that, subject to TVA's written approval, Contractor at its expense may replace or modify said invention so that it becomes non-infringing, provided that any substituted or modified equipment, materials, or processes shall meet all the requirements and be subject to this Contract.
- d. The aforementioned obligations shall not apply to any equipment, materials, processes, the detailed design of which (excluding rating and/or performance specifications) has been furnished in writing by TVA. Contractor warrants that any information received by TVA under this Contract is without binder of secrecy and is not under obligation of privilege or confidentiality to any third party.

#### **8.5 Handling and Disposal of Asbestos (1005)**

- a. Throughout the performance of Work, Contractor shall comply, and be solely responsible and liable for its subcontractor(s)' compliance, with all Applicable Laws, pertaining to the handling and disposal of asbestos or asbestos-containing materials (either or both, "ACM"), and potentially asbestos-containing materials ("PACM"), including, without limitation, regulations of the United States Environmental Protection Agency (EPA), the Occupational Safety and Health Administration (OSHA), and appropriate State and local authorities.
- b. Contractor shall notify its and its subcontractor(s)' employees, and TVA's CTS, of the existence of any ACM or PACM that will be removed or disposed of during the performance of this Contract, prior to beginning Work that involves the removal or disposal of ACM or PACM.
- c. Contractor, by entering into this Contract, certifies that it and its subcontractor(s), as applicable, currently have and will maintain all required certifications and will comply with all Applicable Laws relating to ACM and PACM during the performance of the Work. Furthermore, Contractor shall furnish copies of all such agency-issued certifications prior to commencement of Work. Failure to provide the required certifications may result in the termination of this Contract for default.

- d. In addition, where worker accreditation is required by Applicable Laws for Contractor's or its subcontractor(s)' performance of Work that involves or may disturb ACM or PACM, the following evidence of such accreditation shall be furnished to TVA's CTS for each Contractor or subcontractor employee prior to that employee's performance of Work: Name, social security number, certificate number, and expiration date.

## **9. Representations and Warranties**

### **9.1 Warranties (1502)**

- a. The Contractor guarantees that homes retrofitted as part of this EEM Project will capture a minimum 25% energy savings per home for a minimum of 229 homes in the City of Oak Ridge, Tennessee. Should Contractor fail to meet this guarantee, Contractor will, at its expense retrofit additional home(s) as needed to meet the foregoing guarantee.
- b. The Contractor shall cooperate with TVA or its authorized representative(s) in performing evaluation, measurement, and verification (EM&V) of the Work. Information accessed for EM&V may include, but is not limited to, electricity metering data, onsite verification of installations and program compliance, project records, and project site billing records. All information collected will be held confidentially by TVA and will only be used by TVA or its authorized representative(s) for program analysis purposes. Contractor shall ensure that TVA and its authorized agents have access to the project sites at reasonable times and for a period of five (5) years from project completion date and/or Company's receipt of incentive payment under this agreement for performing EM&V. Contractor's participant agreement(s) between Contractor and project participant(s) shall include language that each participant agrees to allow the EM&V as described above and signs the agreement acknowledging the same.
- c. The Contractor agrees to provide TVA or its authorized representative aggregate customer billing data for all participants representing twelve months prior to the installation of any energy efficiency or technology measure as well as twelve months of aggregate data representing post installation of the measures or technology. Contractor shall include within any participant agreement between the Contractor and project participant(s), language that each participant agrees to allow the Contractor to provide that data to TVA or its authorized representative(s) for purposes of conducting EM&V studies.
- d. The Contractor will provide copies of each signed agreement as part of the invoicing process. No payment will be made for any site without a signed participant agreement containing the required permissions and authorizations outlined in this section.
- e. The Contractor represents and warrants that it will conduct the Work in a manner and with sufficient labor, materials, and equipment necessary to affect a diligent pursuance of the Work through completion and acceptance.
- f. The Contractor represents and warrants that it has the responsibility and capacity to train and supervise its employees, Subcontractors and suppliers to ensure the Work complies with all requirements of this Contract.

- g. The Contractor represents and warrants that its employees and Subcontractors shall exercise the degree of skill and care required by customarily accepted good practices and procedures.
- h. Contractor warrants that the Work, including installed systems and materials, will provide efficient and satisfactory service for at least two years from installation or the time period set forth in an applicable manufacture warranty, whichever is longer.
- i. The Contractor warrants that the Work will meet the functional and performance requirements defined in this Contract.
- j. If Contractor fails to meet any of the above warranties or guarantees it shall, at its expense, re-perform the Work or take actions necessary so that the Work is in conformance with the warranties and guarantees herein. To the extent Contractor performs Work that is not satisfactory to TVA, TVA may, in addition to any other rights or remedies set forth in this Contract, suspend Contractor's performance of the Work.
- k. The obligations and representations contained in this Contract are Contractor's sole warranty and guarantee obligations and TVA's exclusive warranty remedy. EXCEPT AS PROVIDED IN THIS CONTRACT, CONTRACTOR MAKES NO OTHER WARRANTIES OR GUARANTEES, EXPRESS OR IMPLIED, RELATING TO CONTRACTOR'S SERVICES AND CONTRACTOR DISCLAIMS ANY IMPLIED WARRANTIES INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

## **9.2 Contractor's Representations and Warranties (1504)**

- a. Contractor represents and warrants to TVA as follows:
  - 1. Contractor (i) is a duly organized municipal corporation in the State of Tennessee, validly existing, and in good standing in the State of its incorporation or formation, (ii) has complied with all federal and state laws relating to its structure and business; (iii) has all requisite power to carry on its business as it is now being conducted and as it is proposed to be conducted; and (iv) has all necessary power and authority to enter into, execute, deliver, accept, and fully perform this Contract.
  - 2. Contractor has taken all necessary action to authorize the execution, delivery, and performance of this Contract and upon the execution of this Contract, this Contract shall constitute the valid and binding obligation and agreement of Contractor, enforceable against Contractor in accordance with its terms.
  - 3. Neither the execution, delivery, or performance of this Contract by Contractor, nor compliance with the terms and provisions hereof, will result in any breach of the terms, conditions or provisions of, or conflict with or constitute a default under, the terms of any contract, indenture, or any other agreement or instrument by which Contractor is bound.

## 10. Rights and Remedies

### 10.1 Cumulative Remedies (1604)

- a. All rights and remedies afforded TVA shall be cumulative, that is, in addition to every other right and remedy provided under this Contract or by law.

## 11. General Terms and Conditions

### 11.1 Small Business Subcontracting (1701)

- a. TVA is committed to increasing expenditures with small businesses and TVA contractors must upon request negotiate a subcontracting plan and make good faith efforts to meet the plan. Absent a negotiated plan, each contractor is encouraged to assist TVA in meeting the following goals.

*Small Business (SB)	27% of contract expenditures
Small Minority Business (Small Disadvantaged Business) (SDB)	5% of contract expenditures
Small Woman-Owned Business (WOSB)	5% of contract expenditures
HUB Zone Small Business (HUBZone SB)	3% of contract expenditures
Small Veteran-Owned Business (VOSB)	3% of contract expenditures
Small Service-Disabled Veteran-Owned Business (SDVOSB)	3% of contract expenditures
Valley Business (VB)	70% of contract expenditures

\*This goal includes subcontracts with the five listed categories of small businesses.

- b. In order to include supplier contributions, Contractor shall report subcontract expenditures under this Contract with each of the above business categories in such form and manner as required by TVA within 30 days after the close of each calendar quarter (unless an annual commercial subcontracting plan has been approved by TVA) and shall cooperate in any studies or surveys as TVA may require in order to determine compliance with the subcontracting plan. Contractor shall report data thru the web-based, online Subcontract Reporting System (SRS). The Subcontract Reporting System (SRS) collects subcontract award data from prime contractors/subcontractors that: (a) hold one or more contracts over \$700,000 (over \$1.5 million for construction of a public facility); and are required to report subcontracts awarded to Small Business (SB) Small Disadvantaged Business, Woman-owned business, HUBZone Small Business, Veteran-Owned Small Business and Service-Disabled Veteran Small Business concerns under a subcontracting plan. For TVA, the system also collects subcontract award data for Valley Businesses (VB).

- c. "Small Business" is defined in Title 13, Code of Federal Regulations (C.F.R.), as amended, which contains detailed industry definitions and related procedures. For purposes of this Section, "Small Minority Business" shall have the same definition contained in 13 C.F.R., as amended, for "Small Disadvantaged Business." "Small Woman-Owned Business" is defined as a small business that is at least 51% owned by one or more women, and whose management and daily business are controlled and operated by one or more women. A "HUBZone" business is defined as a small business located in a historically underutilized business zone including economically depressed metropolitan areas, rural counties, or Indian reservations. "HUBZone Small Businesses" appear on the list of Qualified HUBZone Small Business Concerns maintained by the SBA. "Small Veteran-Owned Business" is defined as a small business that is at least 51% owned by one or more honorably discharged veterans, and whose management and daily business are controlled and operated by such veterans. "Small Service-Disabled Veteran-Owned Business" is defined as a small business that is at least 51% owned by one or more veterans with service-connected disability as defined in 38 U.S.C., § 101(16), and whose management and daily business are controlled and operated by such veterans (or by the spouse or caregiver of a veteran with a permanent and severe disability).
- d. Liquidated Damages for SMWOB Subcontracting Plan (required by 15 U.S.C. § 637(d)).
1. Failure to make a good faith effort to comply with the subcontracting plan, as used in this Section, means a willful or intentional failure to perform in accordance with the requirements of the subcontracting plan approved under this Section or willful or intentional action to frustrate the plan.
  2. If, at Contract completion, or in the case of a commercial plan, at the close of the fiscal year for which the plan is applicable, Contractor has failed to meet its subcontracting goals and the Contracting Officer decides in accordance with paragraph d.3 of this section that Contractor failed to make a good faith effort to comply with its subcontracting plan, established in accordance with this Section, Contractor shall pay TVA liquidated damages in an amount stated. The amount of damages attributable to Contractor's failure to comply shall be an amount equal to the actual dollar amount by which Contractor failed to achieve each subcontract goal or, in the case of a commercial plan, that portion of the dollar amount allocable to government contracts by which Contractor failed to achieve each subcontract goal.
  3. Before the Contracting Officer makes a final decision that Contractor has failed to make such good faith effort, the Contracting Officer shall give Contractor written notice specifying the failure and permitting Contractor to demonstrate what good faith efforts have been made. Failure to respond to the notice may be taken as an admission that no valid explanation exists. If, after consideration of all the pertinent data, the Contracting Officer finds that Contractor failed to make a good faith effort to comply with the subcontracting plan, the Contracting Officer shall issue a final decision to that effect and require that Contractor pay TVA liquidated damages as provided in subsection d.2 of this Section.
  4. With respect to commercial plans approved by another federal agency, the contracting officer who approved the plan will perform the functions of the Contracting Officer under this Section on behalf of all agencies that awarded contracts covered by that commercial plan.

5. Liquidated damages shall be in addition to any other remedies that TVA may have.

**11.2 Assignment (1702)**

- a. This Contract or any interest therein or in any moneys due or to become due shall not be assigned, used as collateral, or otherwise disposed of without previous written consent of TVA's Contracting Officer.

**11.3 Laws and Regulations (1705)**

- a. Contractor and its subcontractor(s), and their employees and representative(s) shall comply with all Applicable Laws in effect during performance of Work, and, Contractor is solely responsible for such compliance and the liabilities resulting from non-compliance with Applicable Laws, including, without limitation: fines and penalties, corrective actions, and rework, and implementation of any injunctive sanctions or relief. None of the foregoing costs, expenses, or liabilities, whether caused by Contractor, its subcontractor(s), or their employees or representative(s), shall be charged to or reimbursed by TVA.
- b. If Contractor discovers any discrepancy or inconsistency between this Contract and any Applicable Laws, Contractor shall report the same immediately, in writing, to the TVA Contracting Officer for disposition.
- c. Contractor recognizes that even though Contractor's compensation from TVA may be computed on a per hour basis, Contractor is responsible for complying with the Fair Labor Standards Act and shall pay, and shall require its subcontractor(s) to pay, the personnel performing services under this Contract in such a way that Contractor and such subcontractor(s) are in compliance with the Fair Labor Standards Act regardless of whether such compensation is on a salary basis or on a per hour basis.

**11.4 Nondisclosure (1707)**

- a. Contractor agrees not to divulge to third parties, without the prior written consent of TVA, any information that a prudent business person would consider sensitive or which is designated by TVA as proprietary or confidential, obtained from or through TVA or developed or obtained by Contractor in connection with the performance of this Contract. Access to sensitive TVA information must be approved in advance by TVA's Contracting Officer and CTS. If so requested by TVA, Contractor further agrees to require its employees to execute a nondisclosure agreement prior to performing any services under this Contract. Notwithstanding the above, the preceding shall not apply if the information was public knowledge, already known by Contractor, was obtained by Contractor from a third party who did not receive the information from TVA, or was independently developed by Contractor's employees who did not have access to such information. This provision shall be made applicable to all subcontractors under this Contract.
- b. Notwithstanding the above, TVA hereby acknowledges Contractor's obligations under state law to comply with Tennessee's public (open) records laws and any disclosures made by Contractor in accordance with those laws shall not be deemed a violation of the nondisclosure provisions of this Contract.

**11.5 Terms Incorporated By Reference (1710)**

- a. This Contract incorporates by reference the following regulatory provisions, which, to the extent applicable to this Contract or the Work, apply as if they were set forth in their entirety in this Section, and are available from TVA's Supplier Portal Internet Site at <http://supplier.tva.gov> under "Clauses Incorporated by Reference."
  - 1. All Solicitations, Purchase Orders, or Contracts
    - a) Affirmative Action and Equal Opportunity; Asbestos Containing Materials; Officials Not To Benefit; Small Business Policy;
  - 2. All Solicitations and Contracts Over \$100,000
    - a) Anti-Kickback Procedures; Drug Free Workplace; Lobbying; Nondiscrimination in Public Accommodations; Walsh-Healey;
  - 3. All Solicitations and Contracts with Individuals
    - a) Drug Free Workplace;
  - 4. All Construction Work in Excess of \$10,000
    - a) Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246).

**11.6 Order of Precedence (1711)**

- a. In the event of a conflict or inconsistency between or among the Sections of this Contract, the conflict or inconsistency shall be resolved by giving precedence in the following order:
  - 1. This Contract
  - 2. Exhibits and Attachments hereto
  - 3. POs/Work Releases issued under this Contract
  - 4. Specifications provided by Contractor, if any.

**11.7 Governing Law (1712)**

- a. TVA is a corporate agency and instrumentality of the United States and this Contract shall be governed by and construed under Federal law. In the event Federal law does not provide a rule of decision for any particular disagreement, the law of the State of Tennessee shall apply; provided, however, in no event shall Tennessee's choice of law provisions apply.

**11.8 Disputes/Forum Selection/Interpretation (1713)**

- a. The parties will use their best efforts to resolve disputes informally at the lowest possible levels of decision-making, and consensual alternative dispute resolution processes may be used. The parties agree that any lawsuit between them that asserts a claim or claims arising out of or related to this Contract (whether sounding in Contract, tort, or otherwise) shall be filed and litigated to conclusion only in the United States District Court for the Eastern District of Tennessee, and each party hereby consents to the jurisdiction and venue of that court for all such lawsuits. Notwithstanding the foregoing sentence, either party may bring an action which seeks to enforce a right of indemnity or contribution in any federal court with proper jurisdiction and venue in which the underlying claim for which indemnity or contribution is being asserted.
- b. All questions concerning interpretation or clarification of this Contract shall be immediately submitted in writing to TVA's Contracting Officer for resolution. Pending resolution of any dispute, Contractor shall proceed with the Work in accordance with the determinations, instructions, and clarifications of TVA's Contracting Officer.

**11.9 Jury Waiver (1714)**

- a. The parties, in any litigation, agree to waive any right they may have to a trial by jury.

**11.10 Contract Disputes Act (1716)**

- a. No Section of this Contract shall be considered a "disputes" clause within the meaning of the Contract Disputes Act, 41 U.S.C. §§ 7101-7109, and this Contract is not subject to that Act.

**11.11 Survival (1717)**

- a. The obligations of TVA and the Contractor under this Contract that are not, by the express terms of this Contract, to be performed fully during the Term, shall survive the termination of this Contract.

**11.12 Public Communications (1722)**

- a. Contractor and its subcontractor(s) must obtain the written approval of TVA's Contracting Officer prior to making any or all of the following types of public disclosures or communications referencing this contract or TVA:
  - 1. Any oral, written, or electronic announcement, including without limitation, announcements on or through social media, press, or new release(s), marketing materials, or comparable materials;
  - 2. Any photographs, tapes or video recordings, of real or personal property owned or controlled by TVA, and the public communication or posting of such photographs, tapes or videos (or related information or images) in any manner or through any media (including on any website); or
  - 3. Any information concerning this Contract, Contractor's or any of its subcontractor(s)' business relationship with TVA, or any related project.

- b. TVA, in its sole discretion, may approve or reject Contractor's or any subcontractor(s)' proposed public communication(s), except to the extent a proposed communication or disclosure is specifically required by Applicable Laws.

**11.13 Organizational Conflicts of Interest (1720)**

An organizational conflict of interest (OCI) arises when Contractor is unable or potentially unable to render impartial advice or assistance to TVA, or the Contractor's objectivity in performing work under a TVA contract is or might be otherwise impaired, or the Contractor has an unfair competitive advantage.

Contractor warrants that, to the best of its knowledge and belief, there are no relevant facts that could give rise to an OCI. If during the term of this Contract Contractor becomes aware of relevant facts that could give rise to an OCI, it shall promptly notify the Contracting Officer of those facts. TVA reserves the right to take or direct Contractor to take such steps as TVA deems appropriate in its discretion to eliminate or mitigate any OCI or the appearance of an OCI.

**11.14 Preexisting Intellectual Property Rights of The Parties (1723)**

- a. Except for any licenses granted herein, neither party claims by virtue of this Contract any right, title, or interest, in (a) any issued or pending patents owned or controlled by other party; or (b) any invention, process, or product arising out of the other party's previous research or development, whether patented or patentable.

**11.15 Expanded Definitions (1724)**

- a. Unless otherwise specified, words importing the singular include the plural and vice versa and words importing gender include all genders. The term "including" means "including without limitation", and the terms "include", "includes" and "included" have similar meanings. Any reference in this Contract to any other agreement is deemed to include a reference to that other agreement, as amended, or restated from time to time. Any reference in this Contract to "all applicable laws, rules and regulations" means all federal, state and local laws, rules, regulations, ordinances, statutes, codes and practices.

**11.16 Headings (1725)**

- a. The division of this Contract into sections, the insertion of headings and/or index numbers and the provision of a table of contents are for convenience of reference only and are not to affect the construction or interpretation of this Contract.

**11.17 Language and Measurements (1726)**

- a. All communication between the Contractor and TVA, including all documents, notes on drawings, and submissions required under this Contract, will be in the English language. Unless otherwise specified in the Contract, the US System of Measurements shall be used for quantity measurement. All instrumentation and equipment will be calibrated in US System of Measures.

**11.18 Time and Date (1727)**

- a. Unless otherwise specified, references to time of day or date mean the local time or date in the city of Chattanooga, Tennessee. If under this Contract any payment or calculation is to be made, or any other action is to be taken, on or as of a day that is not a regular business day for TVA, that payment or calculation is to be made, and that other action is to be taken, as applicable, on or as of the next day that is a regular business day. Where reference is made to day or days, it means calendar days. Where reference is made to workday, workdays, business day, or business days, it means regular working days for TVA. Where reference is made to holiday or holidays, it means those specific Federal holidays in which TVA employees are excused from work.

**11.19 Binding Agreement (1728)**

- a. Except as otherwise expressly provided, all provisions of this Contract shall be binding upon and shall inure to the benefit of the parties, their legal representatives, successors and assigns.

**11.20 Ambiguous Provisions (1729)**

- a. The parties agree that they have had meaningful discussion and negotiation of the provisions, terms and conditions contained in this Contract. Therefore, doubtful or ambiguous provisions, if any, contained in this Contract shall not be construed against the party who physically prepared this Contract. The rule commonly referred to as Fortius Contra Proferentum shall not be applied to this Contract or any interpretation thereof.

**11.21 Counterparts (1730)**

- a. This Contract may be executed in one or more counterparts, each of which is an original, and all of which constitute only one Contract between the parties.

**11.22 Time of Essence (1731)**

- a. For every material requirement of this Contract, time is of the essence.

**11.23 Force Majeure (1732)**

- a. No party shall be liable for any default or delay in the performance of its obligations under this Contract due to an act of God or other event to the extent that: (a) the non-performing party is without fault in causing such default or delay; (b) such default or delay could not have been prevented by reasonable precautions; and (c) such default or delay could not have been reasonably circumvented by the non-performing party through the use of alternate sources, work-around plans or other means. Such causes include, but are not limited to: act of civil or military authority (including but not limited to courts or administrative agencies); acts of God; war; terrorist attacks; riot; insurrection; inability of TVA to secure approval, validation or sale of bonds; inability of TVA or the Contractor to obtain any required permits, licenses or zoning; blockades; embargoes; sabotage; epidemics; fires; hurricanes, tornados, floods; or strikes.
- b. In the event of any delay resulting from such causes, the time for performance of each of the parties hereunder (including the payment of monies if such event actually prevents payment) shall be extended for a period of time reasonably necessary to overcome the effect of such delay, except as provided for elsewhere in this Contract.

- c. If any event occurs or has occurred that may delay implementation or completion of this project, as to which Contractor intends to assert a claim of Force Majeure, Contractor shall notify TVA, in writing as soon as practicable, but in no event later than fourteen (14) business days following the date Contractor first knew, or by the exercise of due diligence should have known, that the event caused or may cause such delay or violation.
- d. If Contractor fails to comply with the notice requirements of this Section, TVA may void Contractor's claim for Force Majeure as to the specific event for which Contractor has failed to comply with such notice requirement.

**11.24 Nonexclusive (1733)**

- a. Notwithstanding anything herein contained that may appear to be to the contrary, this Contract is "non-exclusive" and in no way shall be considered a requirements contract, and TVA reserves the right, in its sole discretion, to retain other companies to perform the Work, or portions thereof.

**11.25 References (1734)**

- a. Unless otherwise specified, each reference to a statute, ordinance, law, policy, procedure, process, document, drawing, or other informational material is deemed to be a reference to that item, as amended from time to time. All referenced items shall have the enforcement ability as if they are fully incorporated herein.

**11.26 Waiver of Claims (1735)**

- a. A delay or omission by TVA hereto to exercise any right or power under this Contract shall not be construed to be a waiver thereof. A waiver by TVA under this Contract shall not be effective unless it is in writing and signed by the party granting the waiver. A waiver by a party of a right under or breach of, this Contract shall not be construed to operate as a waiver of any other or successive rights under, or breaches of, this Contract.
- b. The Contractor's obligations to perform and complete the Work in accordance with the Contract shall be absolute. None of the following will constitute a waiver of any of TVA's rights under the Contract: approval of payments, including final payment; Acceptance; any use of the Work by TVA; nor any correction of faulty or defective work by TVA.

**11.27 Severability (1736)**

- a. In the event that any provision of this Contract is found to be unenforceable under applicable law, the parties agree to replace such provision with a substitute provision that most nearly reflects the original intentions of the parties and is enforceable under Applicable Laws, and the remainder of this Contract shall continue in full force and effect.

**11.28 Relationship of the Parties (1737)**

- a. The Contractor agrees that it shall perform the Work as an independent contractor and that it does not (a) have the power or authority to bind TVA or to assume or create any obligation or responsibility, express or implied, on TVA's part or in TVA's name, except as may be authorized by TVA under a separate written document, or (b) represent to any person or entity that it has such power or authority except as may be authorized by TVA under a separate written document.

**11.29 Entire Agreement (1738)**

- a. This Contract embodies the entire agreement between TVA and Contractor and supersedes all other communications, either oral or written, with respect to the subject matter hereof. The parties shall not be bound by, or be liable for any statement, representation, promise, inducement or understanding not set forth herein. No amendments or modifications shall be valid unless incorporated into this Contract in writing.

SIGNATURE PAGE FOLLOWS

To evidence the parties' agreement to this Contract, they have executed and delivered it on the date set forth in the preamble.

**Tennessee Valley Authority**

By:

Name (printed): Bradley R Wagner

Title: Contracts Manager

Date of Signature: \_\_\_\_\_

**City of Oak Ridge, Tennessee**

By:

Name (printed): Mark S. Watson

Title: City Manager

Date of Signature: \_\_\_\_\_

**Approved by Resolution**

By: \_\_\_\_\_

- Attachments: Attachment A: Scope of Work  
Attachment B: Pricing Schedule  
Attachment C: National Historic Preservation Act  
Appendix A: Installation Guidelines

## **ATTACHMENT A – SCOPE OF WORK**

### **GENERAL**

This Extreme Energy Makeovers Project (“EEM”) targets homes built before April 1996 (i.e., at least twenty years old) within lower-income communities. The project will perform retrofits across a representative portion of a moderate-sized community. Potential deployment sites must have defined geographic boundaries. Anticipated geographic boundaries include school zones/districts, neighborhoods, or significant subdivision developments in urban or rural communities.

The EEM Project will improve the quality of life for residents and/or homeowners by increasing the energy efficiency and comfort of their homes. This will be achieved by improving the home’s thermal envelope, upgrading the systems and technologies within the home, performing pre- and post-implementation audits, and educating the residents and/or homeowners on the intended operation and proper care of the systems, and technologies installed in their home.

An equally essential component of this project is the development of tools and resources for educating residents and/or homeowners, consumers, and communities on the benefits of whole-home, deep energy retrofit improvements. Project team members, or agents of those teams, will educate the participating communities on this project and associated available resources. The outreach should include the following:

- Public education demonstrations on energy efficiency and home retrofits.
- Distribution of pamphlets, brochures, technology and energy saving tips, and incentive program information.
- Communications to the broader community on the benefits of the EEM project.

### **OBJECTIVES**

The objectives of the Extreme Energy Makeovers project are to:

1. Deliver electric energy usage (kilowatt hour) reductions per home of at least twenty-five percent (25%) through whole-home, deep energy retrofit efforts using the energy savings tool provided by TVA;
2. Complete implementation of projects at a cost of \$10.00 per square foot for the project as a whole (not to exceed a deviation of 15%); and

#### **Awareness and Education**

Contractor must educate and raise awareness of the EEM Project, and its benefits, across the entire project community before, during, and after project implementation. Contractor must develop and use a well-defined, TVA approved Communication Plan and a well-defined, TVA approved Education & Outreach Plan.

#### **Participation**

Contractor must create a clear definition of lower-income and any other criteria for participation. Contractor must identify and obtain a sufficient number of qualifying homes in a targeted community to meet the project savings goals.

**Home Audits**

Contractor must include pre- and post-implementation building diagnostics utilizing blower door testing as part of the audit.

**Retrofits**

Contractor must develop and use a TVA-approved project manual that enables implementation work to provide the greatest value at the lowest possible cost. Contractor must plan for health and safety issues that may be encountered (e.g., combustion safety, mold, asbestos, lead). Contractor must include a plan to perform annual maintenance of systems and technologies for a minimum of two years once the implementation is complete.

**Program Oversight**

Contractor's plans must be flexible enough that they can be adjusted on an on-going basis as lessons learned or changing market conditions require. Contractor shall define who will review the project, how frequently the project will be evaluated, and what metrics will be used for the evaluation.

Contractor must submit to TVA, a monthly TVA Program Management Metrics form and a quarterly Customer Feedback Summary.

**Savings**

Contractor must achieve a minimum of twenty-five percent (25%) electric energy reduction per home and submit energy savings data to TVA. Energy reduction will be based upon deemed savings developed by TVA and TVA's authorized agent(s). TVA retains ownership of all energy efficiency gains or carbon credits created as a result of the project.

**WORK SCOPE**

TVA will provide no more than \$2,947,388 to the City of Oak Ridge, Tennessee. ("Contractor") for the development, design, implementation, and completion of the Extreme Energy Makeovers Project ("EEM") that will produce a minimum 25% electric energy savings per home for a minimum of 229 homes in the City of Oak Ridge. Any funding or costs required in an amount greater than \$2,947,388 in order to complete the EEM Project will be the responsibility of Contractor and shall not relieve Contractor from completing the EEM Project within the agreed upon schedule. These costs include all costs associated with EEM Project and associated components, all required permits, and any other costs required to complete installation, receive all necessary approvals, and complete the project. These costs also include annual maintenance of systems and technologies for a minimum of two years after implementation of the project, all associated costs with branding, community recognition, website/social media design, and all other related costs associated with the effective completion of this project, including the necessary system performance monitoring and reporting data tools. Project implementation costs of \$10.00 per square foot will be calculated inclusive of the aforementioned costs.

Any home retrofitted under the EEM Project that fails to meet the required 25% electric energy savings per home will not receive the requested payment for materials and labor spent as part of that home's retrofit until additional changes to the home allow it to achieve the required minimum 25% electric energy savings. Contractor may choose to pay the costs of retrofitting such home using non-EEM funds or submit a different home that does achieve the required energy savings, provided such home was retrofitted during the term of this Contract and within the geographical boundaries Contractor is performing the Work, to count towards the required number of homes to be completed in the project.

TVA will monitor the progress of the EEM Project through reports, data review, and regular meetings between Contractor and members of TVA's Smart Communities technical team. TVA will also conduct appropriate measurement and verification ("M&V") activities to ensure that the EEM Project produces the minimum 25% electric energy savings per home. TVA's measurements will be binding upon Contractor in determining whether the 25% electric energy savings guarantee has been met.

Contractor shall perform all tasks in accordance with the terms of Contract and the mutually agreed upon project schedule. Contractor shall perform the following work:

1. All activities and services necessary to achieve full implementation and completion of the EEM Project in accordance with this Contract;
2. All activities and services necessary to obtain all required permits for the implementation and completion of the EEM Project;
  - a. Obtain all permits, licenses, and other required approvals for the project.
3. All construction activities and services necessary to complete the EEM Project in accordance with this Contract;
4. All materials necessary to complete the EEM Project in accordance with this Contract;
5. All work forces necessary to conduct the Work and complete the EEM Project in accordance with this Contract;
6. All drawings and documents required for the implementation and completion of the EEM Project.
7. Repair and maintenance on Work and installed materials and systems for two years after initial installation or performance, in accordance with customary practices and industry standards.
8. Evaluation, Measurement, and Verification ("EM&V"):
  - a. Contractor will use TVA's Energy Savings Data Tool for the purposes of identifying and documenting the minimum 25% electric energy savings per home.
  - b. Contractor will work with TVA or TVA's authorized agent(s) to comply with EM&V requirements in accordance with this Contract.

TVA will:

- a. Verify, with the reasonable cooperation of Contractor that the EEM Project captures a minimum 25% electric energy savings per home for a minimum of 229 homes, as required by the terms of this Contract.

**Contractor promises and commits to the following:**

1. The EEM Project will deliver electric energy usage (kilowatt hour) reductions per home of at least twenty-five percent (25%) using TVA's deemed electric energy savings values.
2. The EEM Project will complete implementation of projects at a cost of \$10.00 per square foot, not to exceed a 15% deviation.
3. Contractor will report all performance data necessary to meet TVA's EPA reporting requirements.

## **SCHEDULE**

Contractor agrees to meet the following schedule, which may be adjusted upon the mutual agreement of the parties in writing.

<b>Schedule</b>	<b>Date</b>
Project Kick-off Meeting for TVA and Project Team	January 13, 2016
Project Team Delivers Education & Outreach Plan to TVA	February 29, 2016
Project Team Delivers Communications Plan to TVA	February 29, 2016
Project Team Delivers Project Manual to TVA	February 29, 2016
Retrofit Homes	April 1, 2016 – Sept 29, 2017
Final Report Delivered to TVA	November 17, 2017

**ATTACHMENT B: PRICING SCHEDULE**

**Home Retrofits**

<b>TVA EEM Oak Ridge</b>	<b>FY 2016</b>	<b>FY 2017</b>	<b>TOTAL</b>
Marketing	\$6,569	\$4,899	\$11,468
Community Engagement	\$23,462	\$18,863	\$42,325
Communication/Education	\$18,610	\$47,054	\$65,663
Implementation	\$619,663	\$1,567,971	\$2,187,634
Contractor Mgmt and QA	\$40,317	\$101,785	\$142,102
Admin & Oversight	\$87,230	\$220,220	\$307,450
Measurement & Reporting	\$43,444	\$109,677	\$153,121
Maintenance	\$6,475	\$31,150	\$37,625
<b>TOTAL</b>	<b>\$845,769</b>	<b>\$2,101,618</b>	<b>\$2,947,388</b>
<b># of Homes by Fiscal Year</b>	<b>67</b>	<b>162</b>	<b>229</b>

TVA will pay Contractor in accordance with this Pricing Schedule, however at no time will TVA's payment(s) to Contractor exceed the maximum permitted rate per square foot per home as defined in this Pricing Schedule.

**Targeted Rate per Square Foot per Home: \$10.00 per square foot**  
**Allowable Deviation: 15%**  
**Maximum Permitted Rate per Square Foot per Home: \$11.50 per square foot**

TVA shall not pay any costs in excess of the Maximum Permitted Rate per Square Foot per Home.

TVA shall not make any payment if a minimum 25% energy savings per home is not achieved, as determined by TVA in accordance with the terms of this Contract.

All rates shall be fixed and not subject to change during the term of the contract.

## **ATTACHMENT C: NATIONAL HISTORIC PRESERVATION ACT**

For properties selected for this program, Contractor shall determine the date of construction using public county tax records. When proposed work is not listed as exempt in accordance with this attachment and when property is greater than fifty (50) years old, property shall be submitted to TVA for further review in accordance with Section 106 of the National Historic Preservation Act (“NHPA”).

For review, Contractor shall submit to TVA: 1) The address of the property; 2) description of the work to be performed; 3) description of the existing infrastructure that will be replaced (e.g., wood or vinyl doors or windows); and 4) photographs if available. TVA will consult with the State Historic Preservation Office in order to comply with Section 106 of the NHPA. Proposed work shall not take place until TVA has completed their Section 106 review and notified Contractor.

Contractor may initiate work without further approval from TVA pertaining to the NHPA for any work listed in this Attachment as Exemptions, regardless of the age of the property.

### **EXEMPTIONS**

In accordance with 36 CFR 800.3(a)(1) TVA determined the following undertakings have no potential to cause effects to historic properties and are therefore listed as exemptions:

- 1) Air sealing of the building shell, including caulking, weather-stripping, and other air infiltration control measures on windows and doors, and installing thresholds in a manner that does not harm or obscure historic windows or trim.
- 2) Thermal insulation, such as non-toxic fiberglass and foil wrapped, in walls, floors, ceilings, attics, and foundations in a manner that does not harm or damage historic fabric.
- 3) Blown in wall insulation where no holes are drilled through exterior siding, or where holes have no permanent visible alteration to the structure.
- 4) Removable film on windows (if the film is transparent).
- 5) Storm windows or doors, and wood screen doors in a manner that does not harm or obscure historic windows or trim.
- 6) In-kind replacement or repair of primary windows, doors, skylights, and door frames that closely resemble existing substrate and framing.
- 7) Repair of minor roof and wall leaks prior to insulating attics or walls, provided repairs closely resemble existing surface composite.
- 8) Plumbing work, including installation of water heaters.
- 9) Sealing air leaks using weather stripping, door sweeps, and caulk and sealing major air leaks associated with bypasses, ducts, air conditioning units, etc.
- 10) Install insulation on water heater tanks and water heating pipes.

- 11) Install solar water heating systems, provided the structure is not visible from the public right of way.
- 12) Clean, tune, repair or replace heating or cooling systems that does not require a visible new supply or venting.
- 13) Install programmable thermostats, outdoor reset controls, UL listed energy management systems or building automation systems and other HVAC control systems.
- 14) Conduct other efficiency improvements on heating and cooling systems, including replacing standing pilot lights with electronic ignition devices and installing vent dampers.
- 15). Install programmable thermostats, outdoor reset controls, UL listed energy management systems or automation systems and other HVAC control systems.
- 16) Modify duct and pipe systems so heating and cooling systems operate efficiently and effectively (e.g., adding return ducts, replace diffusers and registers, replace air filters, install thermostatic radiator controls on steam and hot water heating systems).
- 17) Installation of new heat pump.

## **APPENDIX A: INSTALLATION GUIDELINES**

### **Air Sealing**

- Work is performed by a contractor who meets Minimum Certification Qualifications Requirements.
- Moisture issues are resolved before work begins.
- Contractor advised participant to install CO monitor (if applicable).
- Air sealing materials are rated for 20-year life and TVA-qualified.
- Contractor air seals the following areas:
  - Ceiling Penetrations: Attic access openings, recessed can lights if accessible and does not require cosmetic ceiling repairs, and other major ceiling penetrations which could include open stairwells, open joist cavities under knee walls, wet walls and plumbing penetrations, electrical penetrations, duct penetrations, chimney penetrations, drop soffits, mechanical chases, kitchen and bath fans, and ceiling height level changes.
  - Basement and Crawlspace: Major penetrations in the basement, crawlspace or other low leaks in the building, which could include plumbing penetrations, dryer vents, wiring penetrations, chimney chases, mechanical chases, rim and band joist penetrations.

### **Attic Insulation**

- Work is performed by a contractor who meets Minimum Certification Qualifications Requirements.
- Contractor prepared existing materials before installation.
- Moisture issues are resolved.
- Clothes dryer exhaust vents, and kitchen and bath exhaust fans are vented outside.
- Blocking is installed around non-IC rated heat sources with 3-inch clearance.
- Unprotected electrical wiring connections are enclosed.
- Knob and tube wiring is replaced and removed.
- Existing knee wall insulation is adequately supported.
- Contractor advised participant to install CO monitor (if applicable).
- Insulation is not crushed or compressed, and is in full contact with the air barrier.
- Insulation does not block combustion air; allow minimum 3-inch clearance.
- Attic Insulation:
  - Attic access openings located in conditioned areas are insulated to R-10 minimum.
  - Insulation depth markers that face the attic access are installed throughout attic space.
  - Attic Insulation is installed to minimum R-38 (unless restricted by space), or an Unvented Attic Assembly is installed (see Unvented Attic Assemblies section).
  - If knee wall has less than R-11 or if adding insulation, then insulate to composite R-18 with a qualified insulation dam on the attic side.
- Materials are installed per manufacturer's installation instructions.
- Work may be required to pass a quality control inspection after installation.
- Combustion Appliances must be vented according to manufacturer's recommendations.

### **Windows and Doors**

- Work is performed by a contractor who meets Minimum Certification Qualifications Requirements.
- Moisture issues are resolved before work begins.
- Contractor advised participant to install CO monitor (if applicable).
- Prime Window Replacement:
  - New window is installed to replace an existing window.
  - Window meets local ENERGY STAR requirements.

- Window has a NFRC sticker.
- If the rough opening is exposed during window replacement, then:
  - A minimum 4-inch, self-adhesive, flexible flashing is installed on bottom, sides, and top of rough opening with overlapping that promotes drainage from top down.
  - Flashing extends 2 inches beyond the sill.
  - Gaps between window frame and rough opening are insulated and sealed airtight; do not use expanding foam.
  - Interior jambs are caulked.
- Storm Windows:
  - Prime window is single pane without an existing storm window.
  - Prime window is made weather-tight before storm window is installed.
  - Storm window has a minimum 20-year life expectancy (see specifications in WND-11).
  - Storm window is sealed to prime window opening with caulk, foam, or weather-stripping; do not seal weep holes.
- Skylights:
  - New skylight is installed to replace existing skylights that are damaged or inefficient; tubular skylights are not eligible.
  - Skylight meets local ENERGY STAR requirements.
  - Skylight has a NFRC sticker.
- Prime Door Replacement:
  - New entry door is installed to replace an existing door that is deteriorated.
  - Door meets local ENERGY STAR requirements.
  - Door is new with new jamb and new threshold shipped by the manufacturer.
  - Door has a NFRC sticker.
  - 3 lines of flexible caulk are installed between the threshold and subfloor.
  - Gaps between door frame and rough opening are sealed airtight; no expanding foam.
  - Interior and exterior finished frame are caulked.
  - Contractor notifies homeowner that failure to paint or stain exterior door may void manufacturer warranty.
- Materials are installed per manufacturer's installation instructions.
- Work may be required to pass a quality control inspection after installation.
- Combustion appliances must be vented according to manufacturer's recommendations.

### **Heating and Cooling**

- Work is performed by a contractor qualified and approved to install heating/cooling equipment who meets Minimum Certification Qualifications Requirements.
- Moisture issues are resolved before work begins.
- Contractor advised participant to install CO monitor (if applicable).
- Electrical permit is required (or mechanical permit if required by local codes).
- Equipment:
  - Equipment is sized based on Manual J 8th edition (95%-125% of total cooling load).
  - Equipment operating capacity is within 10% of equipment rated capacity.
  - When heat pumps are installed the heat pumps should be sized to provide heating to maintain an adequate indoor temperature down to an outside air temperature of 35°F without requiring auxiliary heat.
  - Equipment meets ENERGY STAR requirements.
  - If equipment is a split system, then both indoor and outdoor units (e.g., evaporator coil and condenser) are new and matched per AHRI.

- Package units are new and AHRI listed.
- Equipment has a manufacturer's warranty for a minimum of 1 year on parts and labor, and 5 years on the compressor.
- Clearances:
  - All units are installed with clearances according to manufacturer's recommendations.
  - Provide enough access for servicing.
  - Outdoor unit has a minimum of 18 inches of clearance from any obstruction for air intake.
  - Outdoor unit has a minimum of 4 feet of clearance on discharge side of unit for unobstructed air discharge.
  - Outdoor unit is located a minimum of 4 feet from any exhaust outlets (i.e. kitchen and laundry exhausts).
- Outdoor unit is mounted on a level, continuous, concrete pad.
- Airflow:
  - Airflow is within range recommended by manufacturer (350-450 CFM per ton is typical).
  - Average velocity at face of return air grille is 500 FPM or lower, if possible.
  - Average velocity at face of supply grille/diffuser is between 400 and 700 FPM.
- Duct support:
  - Ducts are adequately supported.
  - Duct supports do not constrict air flow or insulation.
  - Ducts do not come into contact with the ground.
- Air Devices:
  - A minimum of one return air grille is located on each level of the home.
- Refrigerant Lines:
  - Refrigerant vapor (suction) line is continuously insulated.
  - Refrigerant lines are supported and do not contact the ground.
- Condensate:
  - Condensate drain line has a p-trap installed and drains to exterior.
  - The first 6 feet of condensate line is insulated.
  - Auxiliary drain pan with a float switch is installed under indoor unit.
- If contractor is installing a geothermal heat pump, variable capacity heat pump, variable capacity air conditioner, or direct exchange ground source heat pump, then contractor is trained and authorized to install and provide warranty services for the installed equipment.
- Materials are installed per manufacturer's installation instructions.
- Work may be required to pass a quality control inspection after installation.

#### **Duct Sealing, Repair, Insulation and/or Replacement**

- Work is performed by a contractor qualified and approved to install heating/cooling equipment who meets Minimum Certification Qualifications Requirements.
- Moisture issues are resolved before work begins.
- Contractor advised participant to install CO monitor (if applicable).
- Duct system is sealed, insulated, and repaired as needed.
- Duct Sealing:
  - Joints, seams, connections, and penetrations are sealed with UL 181 approved mastics.
  - Fiberglass mesh or rigid duct material may be required, with mastic, for larger openings.
  - Seal the following areas:
    - Largest leaks, including disconnected ducts, missing end caps and other catastrophic holes.

- Areas of highest pressure, including air handler and return plenum and supply plenum
- Entire return duct system, except hard pipe seams.
- Panned joists, wood plenums, wall cavities and/or other building cavities used as part of the duct system.
- Supply take-offs, including starting collars.
- Duct Insulation
  - New ducts have minimum R-8 insulation.
  - New ducts are vapor sealed and weatherproofed.
  - Existing ducts with less than R-4 insulation are insulated to R-8.
- Duct Repair and Replacement
  - New ducts are mechanically fastened and sealed with mastic paste or mastic tape.
  - New supply branch ducts originate no less than 12 inches from end of the trunk line.
  - New supply branch ducts have a damper installed at each take-off.
  - New return cavities under stairs are ducted.
  - New and existing ducts are supported; support does not constrict airflow or duct insulation.
  - Each level of the home has at least one return air grille.
- Materials are installed per manufacturer's installation instructions.
- Work may be required to pass a quality control inspection following completion of the installation.

#### **HVAC Tune Up**

- Work is performed by a contractor qualified and approved to install heating/cooling equipment who meets Minimum Certification Qualifications Requirements.
- Check thermostat for proper operation.
- Check fans, motors, and compressor for proper operation.
- Clean or replace air filters.
- Check refrigerant capacity of the system using subcooling/superheat with pressure gauges and correct as appropriate.
- Inspect refrigerant lines for leaks, kinks, crushed sections, and restrictions.
- Ensure refrigerant line is sufficiently insulated.
- Clean, insulate or repair condensate drain as appropriate.
- Ensure a p-trap is installed in condensate line.
- Ensure that a secondary drain line is in place.
- Inspect drain pan and drain line for biological growth and clean as needed.
- Check and clean evaporator coil.
- Clean condenser coil and straighten any bent fins with a fin comb.
- Check electrical wiring inside and outside the unit to ensure it is in good condition and connections are tight.
- Visually check distribution system for leaks, kinks, and disconnects.
- Inform participant of all damage and appropriate repairs, and provide participant with a quote to make the repairs.
- Work may be required to pass a quality control inspection following completion of the installation.

#### **Electric Water Heaters**

- Work is performed by a contractor qualified and approved to install heating/cooling equipment who meets Minimum Certification Qualifications Requirements.
- Moisture issues shall be resolved before work begins.
- Contractor advised participant to install CO monitor (if applicable).
- Water heater shall have an efficiency rating of at least 0.95 EF (Energy Factor).

- The water storage tank shall have a nominal size of 50 gallons or greater.
- Attic installations are not allowed unless approved by manufacturer.
- If an add-on heat pump is installed onto an existing water heater, the add-on heat pump shall meet ENERGY STAR requirements and the existing water tank shall be leak free.
- An appropriately sized expansion tank shall be installed as recommended by the manufacturer or required by local code.
- All materials shall be installed per manufacturer's installation instructions.
- Work may be required to pass a quality control inspection following completion of the installation.