attachment 4 -TASK ORDER 001

### UNIT 2 – STATEMENT OF WORK

**BPA Service Territory Conservation Potential Assessment**

**Part A – General**

**A.1 Task Order Objective**

The object of this Task Order is to estimate the amount of achievable and technical savings potential and cost in BPA’s service territory.

**Part B – Technical Approach/Tasks**

**B.1 General Requirements**

The contractor is responsible for developing the technical and achievable energy efficiency savings potential in the BPA service territory. BPA service territory is defined as the service territory of BPA’s preference customers[[1]](#footnote-2). This includes BPA full requirements and slice/block customers. For areas where additional resources are used to serve load, the contractor will include the entire area but note that additional resources outside of BPA are used.

The critical output of this effort is the annual 20-year technical and achievable savings potential in total across the BPA region, as defined above from 2016-2035. This task order reflects Phase 1 of this project, which focuses on the total annual savings for the entire BPA service territory.

Contractor should leverage existing data (e.g. Council supply curves, RBSA, CBSA, RSAT, NEEA, regional utility CPAs) wherever possible. Contractor will work with BPA staff to determine the key factors and data that will be used to determine EE potential within the BPA region. For example, there may be valuable information provided in the BPA oversample of the RBSA (Residential Building Stock Assessment) and CBSA (Commercial Building Stock Assessment). Contractor should also consider the use of information available and applicable in utility conservation potential assessments. BPA may be interested in using these utility specific data for inputs into the analysis but does not intend to produce any outputs or results on a utility level. BPA will provide the Contractor with BPA program achievement data through 2016.

Savings potential must be calculated to align with the Council’s Seventh Plan baseline, beginning in 2016 and covering a 20 year period. The contractor will need to work with Council staff to collect baseline information and should expect to meet with Council staff numerous times when developing the methodology as well as questions arise throughout the development of the CPA. The Contractor will also need to align with the Seventh Power Plan on assumptions of codes and standards in the baseline.

The Contractor will need to develop the conservation potential based on the BPA load forecast. The Contractor will use the Seventh Plan frozen efficiency baseline to establish the baseline availability of technologies and costs. However, since the load forecast drives the stock and unit count and turnover the Contractor will need to work closely with BPA to determine how use of the BPA load forecast will results in differences in potential when compared to using the Council load forecast. The Contractor will use the BPA load forecast which will not include embedded conservation. The Contractor will coordinate with BPA load forecasting to receive and understand the data provided.

Savings should be estimated at the measure category level based on BPA’s measure taxonomy which bundles measures at the Technology/Activity/Practice (TAP) level[[2]](#footnote-3). Examples of this include: ductless heat pumps, commercial energy management, and industrial processes. The contractor will work with BPA to create the full list of measure categories. Savings will be rolled up to the end use and sector level. Savings will be outlined by year for 20 years beginning in 2016. Measures costs will be included using a total resource cost assessment. Costs should include the full cost of the measure, any additional costs (e.g. O&M) as well as any quantifiable non energy impacts. Contractor will also need to provide the load shape and capacity value of the measures by summer and winter peak.

Contractor will work with BPA to assign all achievability factors which include the following: saturation rates, technical feasibility, achievability percentages and ramp rates. The contractor will estimate annual achievable savings by incorporating information and assumptions about the above listed factors. All factors will be clearly identified in the CPA workbook.

The contractor will use existing data on measure technologies and cost, including the Seventh Plan supply curves and the Regional Technical Forum[[3]](#footnote-4). The measure information used should be based on the data available in 2015 to set the Seventh Plan potential. Any updates to measures from the RTF since then should not be considered. This contract will not include any primary research of measure technologies.

Contractor will develop a workbook of the energy efficiency supply curves, which will include all measures by category, measures costs, savings by year, capacity value, and achievability factors. Savings will be reported annually in total for the BPA service territory.

The results and outputs of the conversation assessment will be provided to BPA’s Resource Program team. This team is responsible for developing BPA’s Resource Program[[4]](#footnote-5) which outlines the Agency’s proposed approach to meeting the power supply needs established by the BPA White Book in a manner consistent with the Council. The Resource Program team is in the process of enhancing the functionality of the analysis by moving to an optimization model. It is currently assumed that the model will be AURORAxmp, however this decision is not final. The contractor should assume the use of AURORAxmp when developing their proposal. The EE supply curves developed in this project will be provided to the optimization model as an input and compared with other resources to develop a preferred portfolio. Results of the CPA must be provided in format compatible with the optimization model. The contractor will work with the Resource Program team to determine the appropriate format for providing EE supply curves.

The development of the CPA and the results will be provided in Excel and be based on a measure by measure analysis. BPA is most familiar with excel based CPA models but may be interested in moving to other platforms. Contractor should propose this work within Excel but may also provide a proposal of other models that the Contractor would like BPA to consider.

This task order consists of seven main tasks, described in detail below.

**B.2 Specific Requirements**

Task 1: Kick off meeting and work plan

Prior to the kick off meeting, the Contractor shall review materials related to the development of the Council Power Plan, not limited to: energy efficiency supply curves including technologies and inputs for achievability, the Seventh Plan Action Plan (REG-1), the BPA Energy Efficiency Action Plan. The Contractor should also be aware of the BPA Focus 2028 process and the EE Closeout letter. It is expected that the contractor has broad familiarity with the Council’s Power Plan process for calculating energy efficiency potential and the EE supply curves.

***Deliverables:***

* Kick off meeting with BPA staff
* Memo providing detailed work plan, including timeline, roles and responsibilities and major milestones for work

Task 2: Outline methodology for determining total EE savings in BPA service territory

The Contractor will propose the methodology for calculating total annual savings in the BPA service territory. Contractor should use existing data and established methodologies where applicable. Where additional information and data is needed, the Contractor will describe the data needs and the process for collecting the data and determining the location of the EE potential. Contractor will include the proposed approach for, but not limited to, the following:

* How Contractor will align with the Council baseline
* How BPA load forecast will be incorporated into the analysis
* How codes and standards will be incorporated into the analysis
* Existing data available and expected to be used

Contractor should base the methodology off of currently known or used procedures. Draft methodology will be reviewed by both BPA and external stakeholders. Contractor will incorporate BPA and public feedback and develop final methodology.

***Deliverables:***

* Draft memo including the following information
  + Process for alignment with Council 7th Plan baseline
  + Existing data available
  + Additional data needed
  + Methodology for determining savings in BPA service territory
* Final memo incorporating feedback from BPA and external stakeholders

Task 3: Develop energy efficiency technical potential supply curves specific to BPA service territory

The Contractor shall develop 20 year energy efficiency supply curves by measure category for the residential, commercial, industrial, agricultural and distribution efficiency sectors. The technical potential should account for all possible energy efficiency potential regardless of cost. Potential will be split out between retrofit and lost opportunity savings. Potential should not include savings from codes and standards enacted by 12/31/2014. All measures will be rolled up to the end use and sector level.

***Deliverables:***

* Energy Efficiency supply curves in format determined by BPA staff and Contractor
* Memo of methodology, sources of data and key assumptions used

Task 4: Calculate the achievable savings potential for the BPA service territory.

The Contractor will work with BPA to determine the appropriate achievability factors and assumptions for the measure categories of the CPA. Using agreed upon inputs, the Contractor will calculate the 20 year achievable potential for the BPA service territory. Savings will be outlined annually, by measure category type, as well as rolled up by end use and sector level. Savings will be split out between retrofit and lost opportunity.

***Deliverables:***

* EE supply curves with all achievability factors applied delivered in format compatible with BPA Resource Program Optimization Model
* Memo summarizing inputs, assumptions and process

Task 5: Develop draft workbook, report and presentation

Contractor will develop the draft CPA, including the results in excel workbook as well as in a format ready for the Resource Program Optimization Model. Contractor will also produce a draft written report (no more than 50 pages) summarizing the analysis and results of the assessment. The report will include a summary of any differences from the Council analysis, including any errors found in the Council work or areas where BPA differed from Council inputs or assumptions. Contractor will also develop a PowerPoint presentation summarizing the results to be shared with external parties. The draft report will be reviewed by BPA and external parties and will be returned to contractor with comments for development of the final draft.

***Deliverables:***

* Draft CPA report
* Draft CPA workbook in format that is transparent and accessible to public
* Draft CPA results presentation in PowerPoint

Task 6: Develop final workbook, report and presentation

Based on feedback received by BPA and external parties, Contractor will revise the draft CPA and develop the final draft for the report, workbook and presentation.

***Deliverables:***

* Final CPA report
* Final CPA workbook in excel format
* Final CPA ready for input into Resource Program Optimization Model
* Final CPA results presentation in PowerPoint

Task 7: Presentation of Results

Contractor will provide two presentations of results; one internal and one external. Presentations should be approximately 90 minutes in length and will include the following:

* Overview and methodology and process
* Summary of EE supply curves
* Summary of achievability assumptions and inputs
* Results of analysis

1. https://www.bpa.gov/news/pubs/maps/Public\_Tribal\_and\_IOU\_Customer\_Service\_Areas.pdf [↑](#footnote-ref-2)
2. See the BPA UES measure list for the full list of TAPs used by BPA: https://www.bpa.gov/EE/Policy/Solutions/Documents/UES\_Measures\_List\_5-0\_20160921.xlsx [↑](#footnote-ref-3)
3. https://rtf.nwcouncil.org/ [↑](#footnote-ref-4)
4. https://www.bpa.gov/power/P/ResourceProgram/documents/2013\_Resource\_Program\_Final.pdf [↑](#footnote-ref-5)