

**STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
PUBLIC UTILITY COMMISSION**

**REVIEW OF ADMINISTRATIVE ISSUES
RELATED TO THE INTERCONNECTION
PROCESS**

DOCKET NO. 5206

March 1, 2022

Re: Green Development’s First Set of Comments Regarding the Standards for Interconnecting Distributed Generation Final Accounting Including National Grid Provided Examples PUC 1-1-1 and 1-1-2.

Commission Staff,

Thank you for the opportunity to provide our comments on the final accounting of interconnected distributed generation projects from the distribution utility.

1. Your opinion regarding whether the information currently containing in the final accounting:

a. is presented clearly;

The concern our team has with the Final Accounting Report (FAR) is not so much concerning the clarity of the costs presented but rather related to the grouping and detailing of the costs. In the provided example FAR PUC 1-1-1, National Grid has a final accounting of a 3MW project consisting of interconnection system modification costs of \$1,098,962.85 +/- 25%

The reconciled final costs are broken out into categories shown in figure 1 below.

Summary of Final Accounting (Actual Costs)			
	Impact Study	System Modifications	Substation
Labor, Expenses and Fringes	\$5,047.91	\$92,401.01	\$272,954.57
Materials and Handling	\$0.00	\$191,534.72	\$43,155.06
Transportation	\$0.00	\$4,709.34	\$30,509.16
Outside Services	\$20,664.63	\$132,204.61	\$162,964.47
Overheads	\$3,297.54	\$58,317.58	\$87,607.80
Proration Due to CAP WO	\$0.00	\$0.00	\$0.00
Proration Due to CAP A&G	\$0.00	\$0.00	\$0.00
SUB TOTAL	\$29,010.08	\$479,167.26	\$597,191.06
Tax Gross-Up Adder	\$0.00	\$0.00	\$0.00
Income Tax	\$2,457.41	\$45,550.59	\$43,532.79
Property Tax	\$0.00	\$0.00	\$0.00
Sales Tax	\$0.00	\$0.00	\$0.00
TOTAL	\$31,467.49	\$524,747.85	\$640,732.85

Figure 1: PUC 1-1-1 Summary of Final Accounting

As seen, the reconciled costs are broken out into three cost groups (Impact Study, System Modifications, Substation) as well as several cost types (labor, materials, overhead, etc.). While these costs groups/types can reconcile the total expense of the project against the amount invoiced to the customer at ISA they provide little clarity in reconciling the customer payments against the estimates provided in the final system impact study. The system impact study cost estimate is critical to renewable energy customers in order make decisions on a project’s viability and if an interconnection service agreement should be requested.

An example system impact study estimate is shown in figure 2 below.

National Grid Work Item	Conceptual Cost +/-25% Planning Grade Cost Estimate not including Tax Liability				Associated Tax Liability Applied to Capital	Total Customer Costs includes Tax Liability on Capital Portion
	Pre-Tax Total	Capital	O&M	Removal		
System Modifications Narragansett Electric					13.70%	Total
EPS: Reconductor OH with 795 AL from [REDACTED] through [REDACTED]	\$2,403,753	\$1,883,209	\$225,057	\$295,487	\$258,000	\$2,661,753
EPS: Reconductor OH with 795 AL from [REDACTED] through [REDACTED]	\$1,786,957	\$1,228,037	\$319,865	\$239,055	\$168,241	\$1,955,199
EPS: New 23 kV 477 AL OH from [REDACTED] to [REDACTED]. Install 2 new reclosers at [REDACTED]	\$1,606,473	\$1,348,294	\$149,402	\$108,777	\$184,716	\$1,791,190
POI/PCC: New 23 kV 477 AL OH to each PCC: [REDACTED] loadbreak switches, [REDACTED] reclosers, [REDACTED] primary meter assemblies	\$733,694	\$733,694	\$0	\$0	\$100,516	\$834,211
[REDACTED] Substation Connection. See Note #1	\$650,000	\$622,000	\$28,000	\$0	\$85,214	\$735,214
EMS Integration. See Note #2	\$35,000	\$0	\$35,000	\$0	\$0	\$35,000
SUBTOTAL	\$7,215,877	\$5,815,234	\$757,324	\$643,319	\$796,687	\$8,012,567
Interconnecting Customer Interconnection Facilities ("ICIF")					13.70%	Total
Witness Testing. See Note #3	\$17,500	\$0	\$17,500	\$0	\$0	\$17,500
SUBTOTAL	\$17,500	\$0	\$17,500	\$0	\$0	\$17,500
Totals (See Note #4)	\$7,233,377	\$5,815,234	\$774,824	\$643,319	\$796,687	\$8,030,067

Figure 2: example of system impact study estimate

As seen in figure 2, work item 1 (line 1), the proposed cost to reconductor overhead [electrical distribution lines] with 795 Al [conductors] is \$2,403,753, pre-tax. This work item cost estimate includes capital expenditure, operations & maintenance (O&M), and removal. However, in referring back to the reconciled cost groups/types example in figure 1, there is no indication of the actual cost for this work item. Additionally, there is no indication of costs reserved for O&M or removal either. All of these estimated work items are lumped together and leave the customer with no means of understanding if the estimated work items went over budget, under budget, or required changes to the scope.

b. contains enough detail;

As stated above, while the FAR provides sufficient details for the renewable energy customer to reconcile the costs spend by the company against payments made to the company, it is documented in such a way that any review of where the customer payments were spent and on which work items is not identifiable. Short of a review of costs attributed to internal or external company resources very little information can be gained from the FAR.

c. conforms to industry standards (emphasis specific information on why or why not);

A standard tool in construction invoicing, and customer cost tracking, is the American Institute of Architects G703 application for payment continuation sheet tool. The G703 tool can be used to track both internal resources, external resources, materials, and change orders against specific work items. This tool would provide customers with information to understand how the interconnection payments are being spent and to what work items are those costs are allocated.

d. why any additional information would be beneficial, specification the information and level of detail (e.g. solves a problem, improved efficiency, etc.);

As with any tool the quality and type of information provided is key to its usefulness. In order to improve the utility of the FAR report information needs to be directly traceable back to estimated work items. Additionally, each work item would include several subgroupings including internal resources, external resource, materials, overhead, markup, and possible reserve funds for O&M and Removal. These should all be identified and their costs tracked against the initially estimated (budgeted) costs to determine where the interconnection payments are being utilized.