

8th Quarterly Report – Public Page

Date of Report: 8th Quarterly Report – August 1, 2020

Contract Number: 693JK31810002

Prepared for: DOT

Project Title: On-Board Power and Thrust Generation for the Explorer Family of Robots for the Inspection of Unpiggable Natural Gas Pipelines

Prepared by: Northeast Gas Association

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For quarterly period ending: July 31, 2020

1: Items Completed During this Quarterly Period:

During this 8th Quarter the following tasks were completed.

Item #	Task #	Activity/Deliverable	Title	Federal Cost	Cost Share
29	1.7-B	Explorer Integration	Integrate energy harvesting module on the Explorer 20/26 robot	\$13,622	\$13,678
38	1.8-A	System Redesign	Redesign system for robustness and reliability	\$39,375	\$39,375
39	1.7-C	Explorer Integration	Integrate energy harvesting module on the Explorer 20/26 robot	\$13,622	\$13,678
40	1.8-B	System Redesign	Redesign system for robustness and reliability	\$39,375	\$39,375

As seen the project is on schedule.

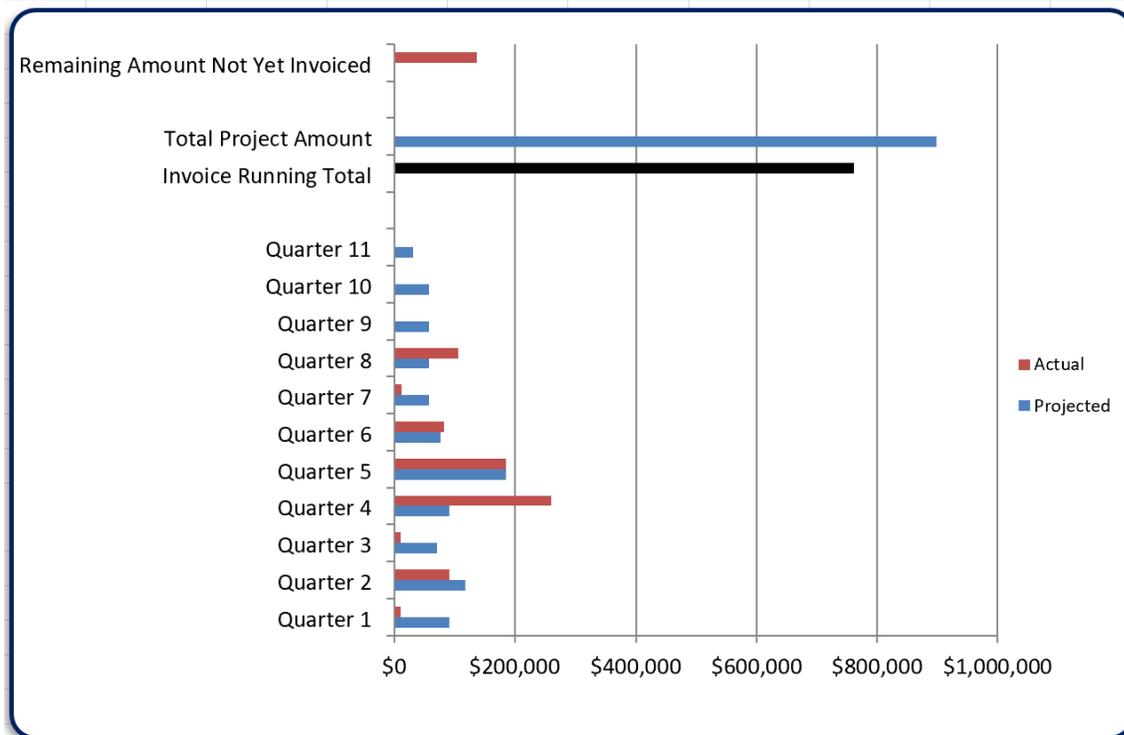
2: Items Not-Completed During this Quarterly Period:

The project is on schedule.

3: Project Financial Tracking During this Quarterly Period:

A The workscope and budget modification submitted in the third week of January, requesting a timeline extension by three quarters and additional resources so we can complete additional workscope focusing on delivering a better system, able to meet commercial grade standards was approved during this period.

QUARTERLY PAYABLE MILESTONES/INVOICES - 693JK31810002



4: Project Technical Status

Task 1.7-B and 1.7-C: Explorer Integration

Work was completed in these two subtasks that involve the identification of the issues related to the integration of the new energy harvesting module onto the Explorer robotic platform. While the various parts are being redesigned (see tasks 1.8-A and 1.8-B below), the control system for the module that determines its mode of integration on the robotic platform has been redesigned to provide a more rugged system.

Task 1.8-A and 1.8-B: System Redesign

An assessment of the energy harvesting module following the field trial showed that the drive system and the turbine/generator system have performed as anticipated and no changes will be made. However, the barrier and the pressure regulation system have to be redesigned. New preliminary designs have been developed for these two subsystems, which are now being detailed.

We will complete the detailed design and initiate manufacturing of the new energy harvesting module during the next reporting period.

5: Project Schedule

The project is on schedule.