



▶ NYSEARCH HOSTS SUCCESSFUL DECARBONIZATION WORKSHOP WITH MEMBERS AND SME'S.....1



▶ AUGMENTED REALITY APPLICATION DEVELOPMENT FOR HOLOLENS 2 VIRTUAL TRAINING SESSION HOSTED BY CRANEMORLEY.....2



▶ LIST OF FINAL REPORTS REVIEWED AND ISSUED FROM APRIL TO JULY 2020.....2

NYSEARCH *spotlight*

DEDICATED TO SERVING ITS UTILITY MEMBER COMPANIES WITH FOCUS ON NATURAL GAS R&D, TECHNOLOGY DEVELOPMENT & COMMERCIALIZATION, AND JOINT INDUSTRY COLLABORATION

NYSEARCH successfully hosted a virtual Decarbonization Workshop with several members and RNG-focused SME's in May 2020. The workshop was designed to identify member needs for developing a cohesive and strategically focused R&D plan for collaborative decarbonization projects with NYSEARCH. The goal from this workshop followed with further discussions is to complete a strategic plan approach to medium-term and long-term R&D project development.

Five specific areas were evaluated for decarbonization efforts:



1. Impact to LDC Infrastructure
2. Gas Operational Issues
3. Measurement Needs
4. Pilots Tests for New Technologies
5. Carbon Capture and Sequestration

Following additional discussion at the June 2020 NYSEARCH meeting, the next set of actions are planned to develop a strategic plan and, also begin decarbonization project development for parallel paths of traditional RNG and blended Hydrogen solutions.



Pathways for Decarbonization



Biogas



Synthetic Methane



Pure Hydrogen



Hydrogen - SMR and Pyrolysis



Power to Gas

NYSEARCH submits mercaptans sensor pre-commercialization and NCDP inspection program proposals to PHMSA

In early June, NYSEARCH submitted two proposals to PHMSA responding to the Research Announcements, which were released by DOT in April 2020.

- **Pre-Commercial Development and Field Testing of a Portable Mercaptan Sensing Device for Gas Industry Applications -** This proposal outlines the pre-commercial development of a mobile mercaptan sensing device that can detect and quantify mercaptan concentrations in the single parts per billion range. Furthermore, reacting to specific field needs, the sensing device will be developed with a non-radioactive ionizer and then extensively tested by several NYSEARCH members in their customer territories.
- **Feasibility Study for a Robotic Platform and Suite of Sensors to Identify Degradation in Non-Conforming Driscopipe @ 8000 -** This proposal focuses on carrying out a feasibility study to identify robotic technologies equipped with sensors capable to detect the degradation/delamination in non-conforming Driscopipe @8000 (NCDP) through live in-line inspection of such pipes in the field. A systematic study of sensory technologies able to detect such delamination will be carried out to identify the best technology to be adopted for integration on a robotic platform.

Final Reports reviewed and issued by NYSEARCH from April to July 2020

Project Number	Project Name	Month Issued/Project Manager
M2014-001 Tasks 1 & 2	sUAS Technology and Regulatory Assessment	April 2020 – Joe Mallia
M2009-008 PhIc	NDE PAUT for PE Pipe Butt Fusion	April 2020 – Joe Mallia
M2010-009	Terahertz Inspection of Plastic Pipe	May 2020 – Joe Mallia
M2018-011 PhI	Scaling of Microbial Power – to – Gas Conversion for Long Term Operation	May 2020 – Ahra Kwon
M2014-001 Task 3	NASA JPL Methane Detection / Control System	May 2020 – Joe Mallia
M2019-002 PhI	Standardization of Surface Expression Equipment and Protocol to Implement Emissions Validation Process	May 2020 – Joe Mallia User's Manual Anticipated in July 2020
T-785	Evaluation of Erosion Resistant Materials & Coatings for NG Lines	June 2020 – Gautam Kakaiya
M2018-007	Development and Testing of MetGlas® Amorphous Metal Tape for Pipe Location	Anticipated in July 2020 – Gautam Kakaiya
M2018-005 PhII	Natural Gas Dispersion in Residential Structures	Anticipated in July 2020 – Jagruti Mehta

CraneMorley and NYSEARCH complete virtual training session for the HoloLens 2 Application Development project with funders



The HoloLens 2 was released by Microsoft in September 2019 and the NYSEARCH Augmented Reality (AR) application development project focused on building applications compatible with the features and capabilities built into this next generation HoloLens. CraneMorley completed development of a Dynamics 365 Guides training procedure (left image) and a Leak Investigation Application (right image shows opening screen to app) that explored the various elements of AR through the new HoloLens 2 device. A virtual unboxing was completed with funders to begin familiarization of the new technology and a full demonstration and training session of the developed applications were completed in June 2020. Next steps revolving business integration and implementation of the HoloLens 2 within individual utilities are being formulated.

Another successful virtual NYSEARCH quarterly meeting conducted with active member participation

During the June 2020 meeting, Renee Davis of Spire Alabama was nominated and approved as Vice Chairperson of the NYSEARCH Committee. **Congratulations Renee!**

The June 2020 NYSEARCH meeting included (5) voting items, several Status Reports and Discussions, and a brainstorming session for new project development. The discussions that are online remain lively, informative and provide the NYSEARCH Staff the feedback needed to meet member requirements for the range of projects that are active. From working groups to annual meetings and contractor exchanges, we are pushing forward with our members on progress toward innovation and improved safety with our R & D projects and products. The September 2020 NYSEARCH meeting will also be held virtually from September 15 – 17, 2020.



NYSEARCH is welcoming another little one to its family this year. Ahra will be taking on motherhood at the end of September when her first baby girl is expected. Ahra hopes she will be able to celebrate with NYSEARCH staff and members as soon as it is safe to do so. She is looking forward to the ebbs and flows of motherhood and welcoming a new life with her partner. Congrats again, Ahra!