

WORKING TO REDUCE METHANE EMISSIONS

INNOVATION ACTIVITIES AND SKILLS FOR MONITORING, QUANTIFICATION AND ABATEMENT



		SERVICE AREAS		
KEY ACTIVITIES	TECHNOLOGY DEPLOYMENT & ENHANCEMENT <ul style="list-style-type: none"> Develop and use software tools and mechanical equipment to detect, reduce and measure emissions Analyze data to draw insights and conclusions about operations Visualization: display information for better interpretation and usability Ongoing testing and optimization for industrial application Training customers on software usage Market products Design and install automated well sites and facilities 	METHANE DETECTION <i>Apply technologies to production processes to reduce GHG intensity and water use</i> <ul style="list-style-type: none"> Install sensing equipment for leak detection and compliance surveys On-site emissions detection: <ul style="list-style-type: none"> Operate handheld devices, cameras, drones/ROV's, etc. Operate equipment for remote sensing of emissions Prioritize and make repairs Calibrate and maintain equipment Remain current on rapidly changing technologies LDAR data management 	EMISSION MITIGATION <ul style="list-style-type: none"> Field and plant inspections Well site automation Manufacture and install emission controls using existing and new technologies Upgrade mechanical, instrumentation and electrical systems Convert from pneumatics Capture fugitive emissions Engine fuel management Operate, maintain and repair systems Knowledge and integration of industry regulations, incentive programs and reporting Analyze data to draw insights and conclusions about operations Estimate costs and material requirements 	EMISSIONS MONITORING, MEASUREMENT AND VERIFICATION <ul style="list-style-type: none"> Manage retrofit programs, control inventory and track regulatory development Conduct quantitative emissions leak rate measurements Quality assurance through development of detailed: <ul style="list-style-type: none"> Inspection protocols Technical procedures Training requirements Performance audits Maintain emission calculations, validation of data, identification of new calculations and systems updates to respond to changes in reporting requirements Manage carbon offsets, carbon taxes, etc. Analyze data to identify operations and maintenance improvements and automation opportunities

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