

Session 3 Panel: Technology Development and Deployment Perspectives

- Technology
 - Until technologies are commercialized, change cannot occur.
 - The more industry conserves, the more that can be sold.
 - Industry must think about technologies as reducing GHGs globally to acknowledge what can be transferred and taken to other industries.
 - When a global product is sold, it's important to remember that it's sold to a global customer. Thus, industry needs to utilize and market Canadian products globally.
 - A 25% reduction in industry's GHG footprint would occur if existing technologies were implemented today across industry.
 - Avoid duplication
 - COSIA work should be tying into PTAC initiatives to avoid duplication.
 - NAL has recruited employees to specifically identify opportunities in the emissions reduction space and is currently considering wide-scale chemical pump deployment to see what reductions are possible by 2020.
- Smart LDAR
 - Smart LDAR was previously an unfamiliar term to industry in reference to the FLIR camera. There was a large amount of mystique around this technology 12 years ago as well as a lineup to access the technology.
 - Industry has come a long way, as FLIR cameras are now required as part of Canada's regulations.
 - There is no such thing as an optimal LDAR frequency.
 - Given there are new technologies that can survey facilities quickly, the way to go about LDAR is to pick a mitigation target, choose a given technology and method, calculate the costs associated with the new technology and LDAR frequency to see which combination works best for the chosen location and target.
 - The ratio of cost to emissions reduction is an important metric for gauging alternative LDAR.
 - Regulators are likely not going to approve individual method technologies; they're going to approve methods. Thus, Industry needs to focus more on methods and programs.
- Is more data needed?
 - More data is not always better data. Industry needs to think more carefully about what is being measured and how it's being measured. Small sample sizes may miss large emitters.
 - Uncertainty is not the enemy. There will never be a time industry knows what the baseline emissions are. The key is to accept and understand uncertainty using available data and act on it. Industry must start with what's available, track methane emissions, and re-visit in a few years to see what progress has been made.
- Regulations
 - Industry needs to test/validate technology performance of existing tools and publicly disseminating results to indicate which technologies work.
 - If industry is unable to demonstrate emissions reduction equivalency, it may be considered into regulations. Industry must establish how technologies can be brought to the regulator for approval.
 - The AER's draft methane regulations are being designed as an adaptive regulation framework to accommodate the speed of innovation is going in this space.

- There will be a mandatory regulatory check-in period (Dec 21, 2022 per the draft Alberta methane regulations)
 - As technology develops over time, regulations can adjust to any changes. The AER may open the framework during the check-in period to optimize regulations.
 - The AER does not want to stifle innovation and is looking to have protocols installed in late 2019.
- Closing comments
 - There is a sense of urgency to do this work quickly.
 - Collaboration and coordination are key.

Questions from the audience

Q: As the AER accepts alternative detection and quantification for equivalence from individual operators, will this be shared across industry?

Yes. This will be flexible and amendable. Any knowledge captured or successful case studies will be shared broadly with industry.

Q: How do we take the fear out of implementation today? And how do we get more projects implemented today while still moving forward with innovation?

When operators get pitches from technology providers, their ask is too much with respect to variability and unknowns. Technology providers must make it simple for operating engineers to implement proposed technologies.

Canadian Natural has a website that any technology provider can access to contact Canadian Natural about technologies that they would like to test. Industry needs to know tool advantages and marry them with business units to ensure that they've passed those hurdles. It is important that industry makes itself available to pilot.

The regulatory push is what's missing from the equation.

Q: Do measurement technologies actually reduce emissions?

There's a metric called the effective detection limit. It's important to understand that technology works under certain conditions and we need to start quantifying this metric for technologies so that industry can understand what can be reduced.

Q: Colorado is doing monthly LDAR surveys. What can we learn from them?

The monthly LDAR survey is only applicable to some sites, not all of them. We are trying to get these things from Colorado to see if they're as effective as initially expected.