On the Thursday afternoon of the Joint Technical Meeting, there will be the opportunity for delegates to join 2 out 5 available roundtable discussions, as detailed below. Each roundtable discussion will be 90 minutes long, and will be chaired by 1 or 2 moderators, with a panel of subject matter experts. Participants are advised to come prepared with questions and be ready to engage in lively debate on any subjects raised.

No.	Title	Time	Location	Chair(s)
All delegates are invited to attend the 1st roundtable discussion				
1	The Energy Transition – Addressing the concerns of H_2 transmission	1350-1520	The Wolfson Suite	Otto Jan Huising (ERPG) TBC (PRCI) Nick Kastelein (APGA)
Thereafter, each delegate can select from one of the following roundtable sessions				
2	The Energy Transition – Addressing the concerns of CO_2 gathering, transmission and storage	1550-1720	The Wolfson Suite	Paul Roovers (EPRG) / Guillaume Michal (APGA)
3	Sour Service – Concept, design and testing		The GB Ong Room	Brian Newbury (PRCI) / Graham Alderton (EPRG)
4	Achieving overmatched girth welds for high strength pipe		The Tausend Room	Steve Rapp (PRCI) / Laurent Pomie (EPRG) / Mehdi Fardi (APGA)
5	Addressing mechanical damage		The Wadsworth Room	Mures Zarea (PRCI) / Aaron Dinovitzer (PRCI) / Chris Carter (APGA)

A summary of each of the roundtable topics can be seen below:

Roundtable 1: The Energy Transition – Addressing the concerns of H_2 transmission

Many organisations are currently undertaking a wide range of research into the implications on existing and new pipeline networks for the transmission of both hydrogen/methane blends as well as pure hydrogen. This presents a risk of uncontrolled duplication of efforts, which can be partially offset by increasing awareness of the various workstreams. At the same time, there are differing views being developed in different regions relative to the perceived severity of risk when transmitting hydrogen. In most cases, the design basis being used is ASME B31.12, but this design standard was not conceived for the currently planned expansive hydrogen networks of the future.

The roundtable session will endeavour to discuss and gather intel on the various development programmes being undertaken, debate the regional differences in approach to design and impact of hydrogen, and consider the suitability and potential modifications/alternatives to ASME B31.12 for future hydrogen expansion.

Roundtable 2: The Energy Transition – Addressing the concerns of CO_2 gathering, transmission and storage

A key aspect of the energy transition will be addressing the need for reduction in output of CO_2 into the atmosphere. It is anticipated that this need will come before the full scale development of hydrogen systems, as the utilisation of fossil fuels will continue for some time. While a significant amount of research into CO_2 transmission (and associated storage) has been going on for several years, there is still room for debate on the exact nature of some of the design, manufacture, installation and operation concepts/needs of CO_2 lines. This roundtable discussion will aim to raise awareness of emerging principles for addressing design issues such as fracture and corrosion control, as well as considering their impacts on manufacture, installation and operation.

Roundtable 3: Sour Service – Concept, design and testing

Sour service issues remain a primary concern of the industry; recent experiences surrounding the debate around the suitability of TMCP steel in certain sour environments has moved the subject on and raised new questions. At the same time, increasingly complex qualification concepts are leading to extremely challenging test methods and materials/design challenges. This roundtable will allow for discussion on the progress of the TMCP issue, as well as questioning and challenging some of the more recent approaches to qualification.

Roundtable 4: Achieving overmatched girth welds for high strength pipe

In the past few years, there has been a substantial amount of work done inside and outside of research organizations in the area of achieving overmatched pipeline girth welds. This roundtable discussion will address changes being implemented in line pipe materials, welding consumable selection, field welding heat input controls, construction specifications and weld procedure qualifications.

Roundtable 5: Addressing mechanical damage

Research over the past 20 years has improved the pipeline industry's understanding of the behavior and failure processes for mechanical damage. This new understanding of mechanical damage has influenced the methods available for use in characterization, inspection, assessment, and remediation of pipelines considering mechanical damage. This research and development work has resulted in a range of assessment tools considering feature formation strain, failure pressure and fatigue life assessment including the effects of coincident features such as corrosion, welds, gouges, and cracks. Guidance documents defining recommended practices for characterization, assessment and remediation of mechanical damage have been developed and published and codes and standards are evolving.

PRCI in cooperation with the US Department of Transportation (USDOT) Pipeline and Hazardous Materials Safety Administration (PHMSA) completed a project to systematize the last 20 years of mechanical damage research. This report provides this summary in four mechanical damage subject areas including: Formation and Behavior, Detection and Characterization, Assessment and Management and Repair and Remediation. In parallel, EPRG, APGA have also worked on this topic, including collaboratively.

The objective of this round table will be to discuss the status and opportunities for improvement in current mechanical damage understanding or tools and will be introduced by a brief overview of the PRCI/PHMSA project, as well as of the most recent work of the companions' organizations.