



Picture courtesy of Gas Connect Austria

Prime movers' group on Gas Quality and H₂ handling

#5 meeting, 28th January 2021 (09:30 – 13:00 CET)

Disclaimer

The information included in this presentation is subject to changes. The proposals are presented for informative purposes only since the work is still in progress.

The organisation is not liable for any consequence resulting from the reliance and/or the use of any information hereby provided.

Agenda

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Welcome and short debriefing from last meeting	09:30 – 09:40
L-gas to H-gas conversion. Presentation by F. Dietzsch (DVGW)	09:40 – 10:00
Q&A	10:00 – 10:20
Update on stakeholder workshop on gas quality	10:20 – 10:30
Answers received to 'call of experts/interest'	10:30 – 11:00
Break	11:00 – 11:15
Proposals on sub-groups plan	11:15 – 12:00
Debriefing Sub-group 1) WI framework progress	12:00 – 12:15
Goals & deliverables for 2021	12:15 – 12:30
A.O.B. & next meetings	12:30 – 13:00

Debriefing from last meeting

General sub-groups proposal from 17.12.20

Sub-group 1) WI framework:

- Goal: set up the **basic rules and procedures** needed for the implementation of the WI exit classification system proposal
- At least, 4 processes should be investigated: Assignment & switching classes; Assessment of sensitive users; Identification & analysis of mitigation measures; Communication & information flows

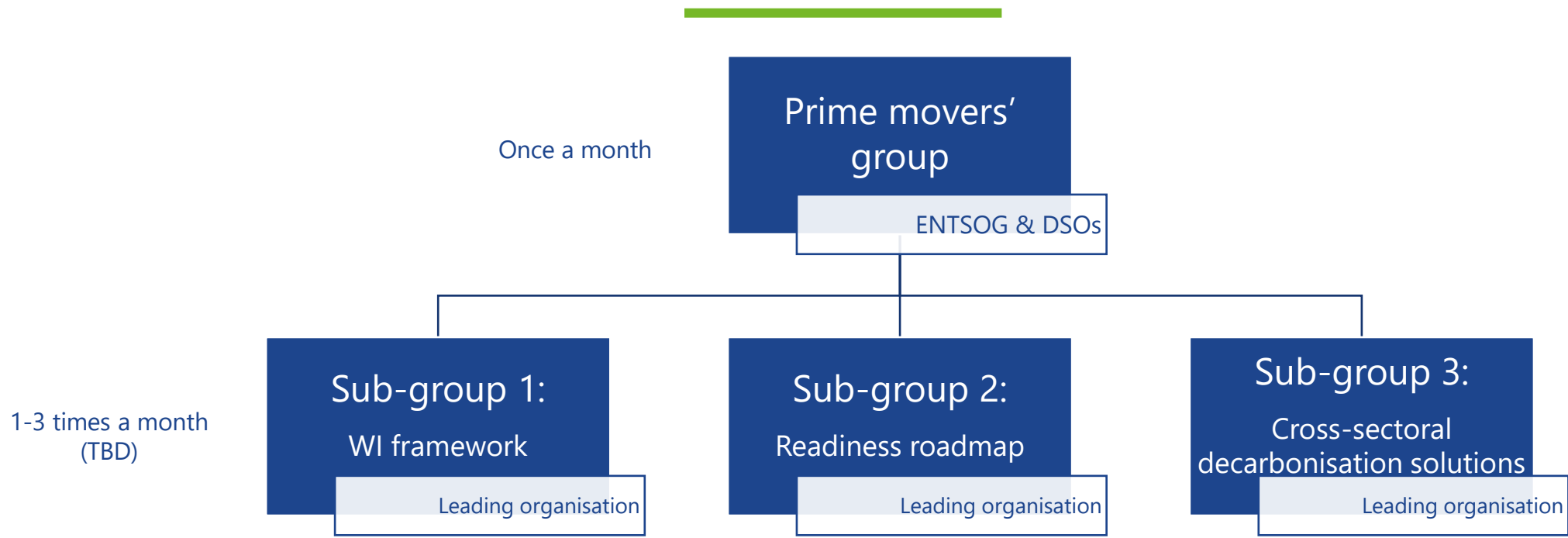
Sub-group 2) Value chain H2 readiness roadmap:

- Goal: Deliver a **common & co-developed roadmap** from the whole gas value chain of what could be feasible for the different interfaces in the short-term, medium-term and long-term, and how they could be interlinked
- This sub-group needs the input and participation from all stakeholders (up-, mid-, downstream, manufacturers, etc.) plus other stakeholders who are already working on readiness topics (e.g., Marcogaz, HIGGS and THYGGA projects, TSOs projects, etc.)

Sub-group 3) Cross-sectoral decarbonisation solutions:

- Goal: Provide guidance about which **gas quality and H2 handling options and tools** can be practically implemented and how along the different interfaces (cross-sectoral approach)
- The following topics could be covered: blending/de-blending & conversion services; technology options & maturity (including digitalisation, smart services/devices, metering and metrology equipment); blend stability & injection control mechanisms; specifics for reverse flows cases; feasibility of injection points (i.e., location)
- Applicable to 'green gases' blends and/or dedicated H2 systems, depending on the case study

General sub-groups proposal from 17.12.20



- **Regular exchange** between sub-groups chairs, ENTSOG & DSOs could be useful to:
 - prepare the briefing of each sub-group to the PMG plenary
 - identify issues, areas or topics that need further discussion in the PMG plenary
 - coordinate and align efforts
 - ensure an adequate and timely communication between all sub-groups

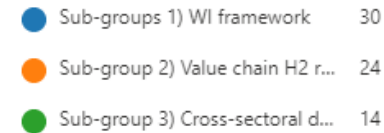
L-gas to H-gas conversion

Update on stakeholder workshop on gas quality

Answers to 'call of experts/interest'

Answers received

- 52 participants
- On which subgroup(s) would you be interested in participating?



Sub-group 1)



Sub-group 2)



Sub-group 3)



+ NSB representatives were invited as part of CEN SFGas TF1 work

You can still join!

Answers received

Expert input could be provided for...

- DSO and TSO side
- Power generation and combustion
- Chemical industry
- R&D
- Standardisation
- Gas turbine
- Residential heating
- Manufacturers
- Service ordering/provision/settlement in the broader market framework

Answers received

Most voted topics to work on



Blend stability & injection control mechanisms and blending/de-blending & other conversion services

2. Feasibility of injection points
3. Digitalisation & smart services
4. Specifics for reverse flows
5. Others:
 - Downstream use of H2 (impact on appliances)
 - Plug flow issues
 - Odourisation

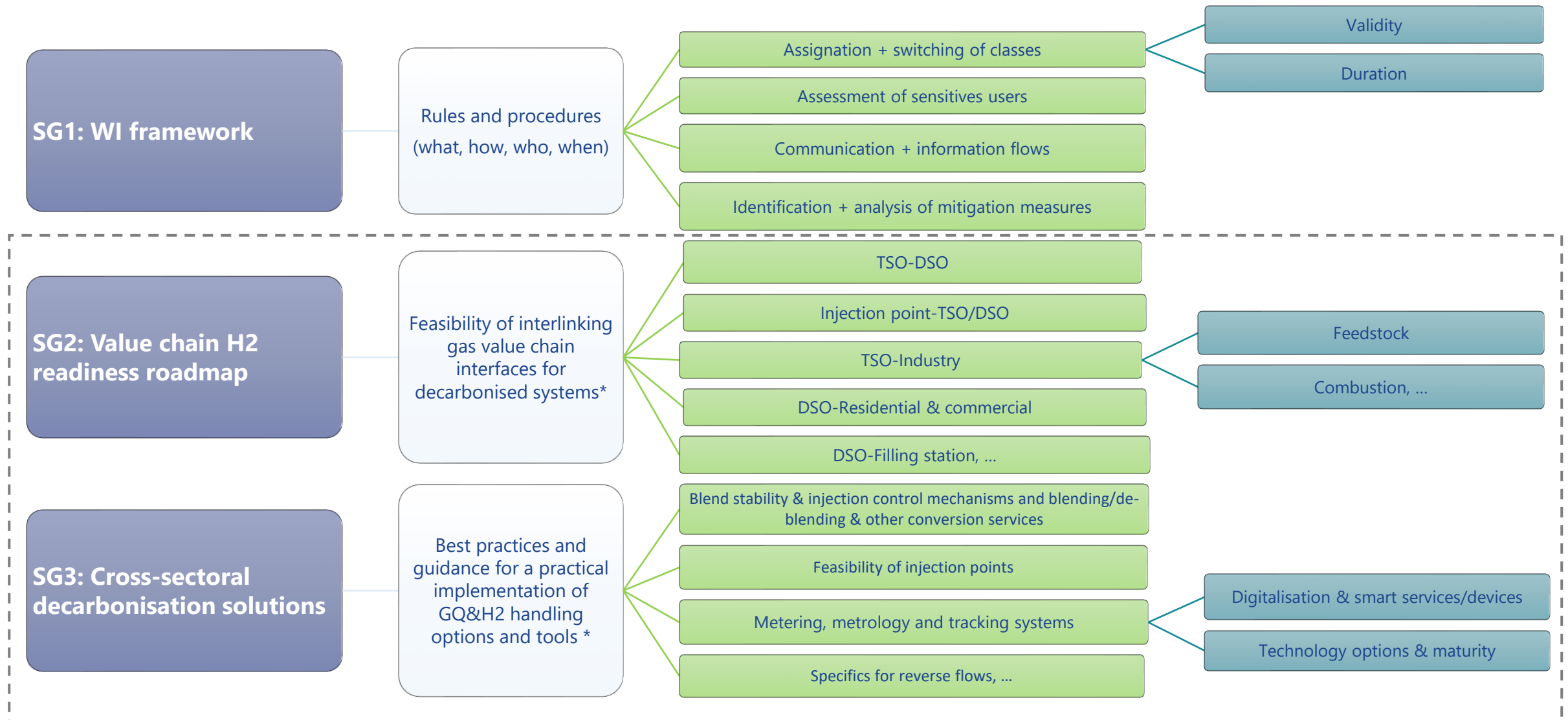
Coffee break

See you at 11:15 😊



Proposals on sub-groups plan

Sub-groups



**Examples shown are proposals and will be discussed during the kick-off meeting based on the submitted feedback and identified priority topics*

Sub-group 1 plan

As agreed during kick-off meeting on 19.01.21:

— Scope & goal

- Provide conclusions that could be **inputs to future Commission proposals** on gas market design
- Work to be done is based on current draft "**CEN SFGas GQS** —Recommendations and considerations on Wobbe index aspects related to H-gas —report". At least four processes (related to current CEN SFGas TF1 proposal) will be investigated by this SG: assignation and switching of classes; assessment of sensitive users; identification and analysis of mitigation measures; and communication and information flows

— Deliverable

- **Clear, descriptive, written document** including the definition of the process, how it can be implemented, when and why it is carried out and who is involved will be developed.

— Timeline

- A first deliverable containing a more **detailed reflection on the framework** needs for the WI classification implementation is expected **by beginning March**, while a more detailed assessment and development of recommendations could be done later (until June)

— Organisation

- A. Vatin (AFNOR/BNG, GRTgaz-RICE) is the appointed chair of the group

Proposal for sub-group 2

— Scope & goal

- Provide conclusions that could be inputs to future Commission proposals on gas market design
- Check the **feasibility of interlinking gas** value chain interfaces for decarbonised systems
- Showcase **how to connect each individual sector** or area within to the future 'decarbonized' gas system structure
- Ongoing work by other associations (such as Marcogaz, GERG, etc.) will be taken into consideration in order to provide added value to the discussions and avoid doubling efforts.

— Deliverable

- Common & co-developed roadmap from the whole gas value chain

— Timeline

- Key findings expected for the second half of 2021



Proposal for sub-group 3

— Scope & goal

- Provide conclusions that could be inputs to future Commission proposals on gas market design
- Facilitate **knowledge sharing and exchange** about the commonly faced **hurdles related to gas quality and H2 handling**, as well as best practices and lessons learned on how to overcome them
- Identification and **assessment of the possibilities** for implementing gas quality & H2 management tools at different interfaces

— Deliverable

- **Fact-based recommendations, best practices or lessons learnt** about existing and potential gas quality and hydrogen handling options and tools and **how to implement** them along the different gas value chain interfaces

— Timeline

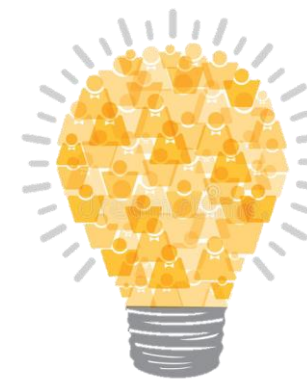
- Key findings expected for the second half of 2021



Proposal for sub-groups 2 & 3 'merge'

— Scope & goal

- Provide conclusions that could be inputs to future Commission proposals on gas market design
- Facilitate **knowledge sharing and exchange** about the commonly faced **hurdles related to gas quality and H2 handling**, as well as best practices and lessons learned on how to overcome them
- Identification and **assessment of the possibilities** for implementing gas quality & H2 management tools at different interfaces
- Check the **feasibility of interlinking** gas value chain interfaces for decarbonised systems based on identified solutions



— Deliverable

- **Common & co-developed roadmap from the whole gas value chain based on fact-based recommendations, best practices or lessons learnt** about existing and potential gas quality and hydrogen handling options and tools and how to implement them along the different gas value chain interfaces

— Timeline

- Key findings expected for the second half of 2021



Debriefing: Sub-group 1) WI framework progress

Sub-group 1) WI framework progress

Kick-off meeting (19.01.21) achieved goals:

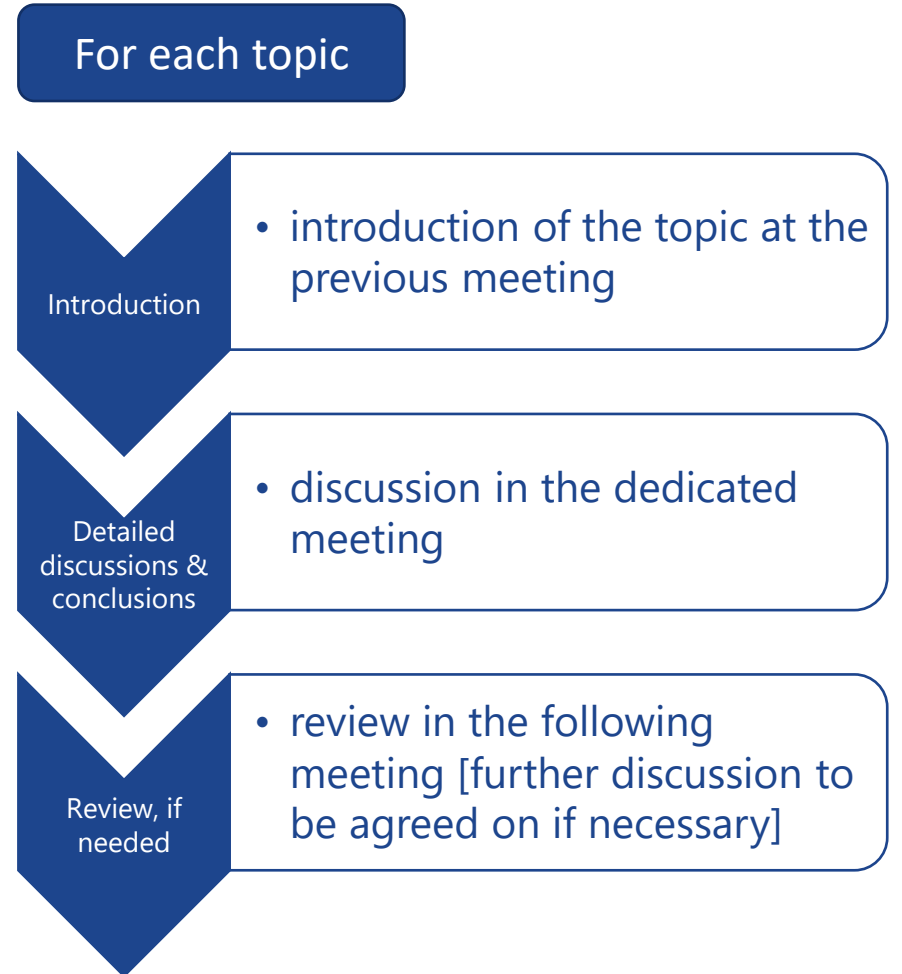
- ✓ Understand the background of SG 1 and the differences between CEN work and this process
- ✓ Discuss and agree on the goal and deliverables for this group
- ✓ Set the basics for upcoming work (e.g. frequency of meetings, expectations, organisation, etc)
- ✓ Appointment of Alice Vatin, GRTgaz-RICE – as chair of the group, supported by Rosa Puentes, ENTSOG
- ✓ Introduction to first SG subject: Assignment and switching of WI exit classes (in preparation for next meeting)

Sub-group 1) WI framework progress

1. **Phase 1 : Preparatory Work** (forming of SG and kick-off meeting)
2. **Phase 2: Reflection on the framework needs for the WI classification implementation**
 - Based on Clause 6 of SFGas GQS report, it is needed to provide more guidance about which are the basic rules and/or procedures needed to implement the identified processes:
 1. Assignment + switching of classes
 2. Assessment of sensitive users
 3. Identification + analysis of mitigation measures
 4. Communication + information flows
 - Deliverable type: **A clear, descriptive, written document including the definition of the process, how it can be implemented, when and why it is carried out and who is involved**
 - First deliverable to be finalised by beginning March 2021
3. **Phase 3: Development of more detailed recommendations**
 - Depending on phase 2 outcome, another phase could be needed to complement the work done
 - To be delivered by mid-June (potentially)

Sub-group 1) WI framework progress

- It is proposed to focus on one topic per meeting :
 - #1 meeting (19/01/2021)** : Kick-off meeting
 - #2 meeting: Assignment + switching of classes** (*incl. validity duration; reassessing classification due to GQ change*)
 - #3 meeting: Assessment of sensitives users**
 - #4 meeting: Validity duration definition***
 - #5 meeting: Intensity/frequency deviation***
 - #6 meeting: Communication + information flows** (*information provision*)
 - #7 meeting: Identification + analysis of mitigation measures** (*e.g. End-user adaptation and mitigation; gas quality measurement; grid management; gas treatment*)
- The work to be done in this group needs the **engagement and active participation** of the stakeholders involved
- Ad-hoc meetings of smaller groups might be needed to discuss or work on specific aspects



*These are not processes, but aspects that define some processes and need ad-hoc discussions

Sub-group 1) WI framework progress

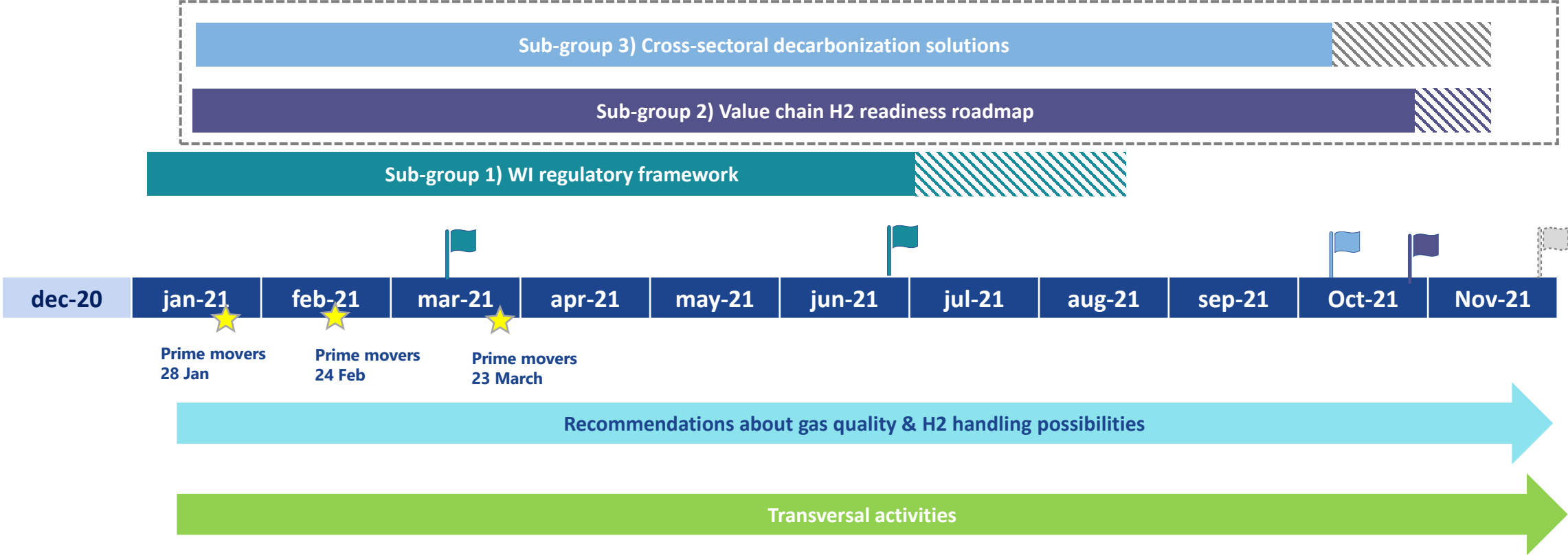


2021 goals & deliverables

2021 goal & deliverables proposed

- **Goal:** Provide inputs that need to be tackled by future Commission proposals in 'gas market design'
- **Deliverables proposal & expected times:**
 - For Q1 and Q2 2021: Regulatory framework for WI classification proposal (**Sub-group 1**)
 - For Q3 2021: Common & co-developed roadmap from the whole gas value chain based on fact-based recommendations, best practices or lessons learnt about existing and potential gas quality and hydrogen handling options and tools and how to implement them along the different gas value chain interfaces (**Sub-groups 2 & 3 'merged'**)
 - For Q3 2021: Produce general recommendations about gas quality and H2 handling possibilities and best practices at the different interfaces (tbc)
- **Transversal activities:**
 - Promote ongoing work
 - Engage with stakeholders outside the prime movers' group
 - Ensure a regular exchange on latest gas quality and H2 handling practices and projects (e.g., metering, safety, H2-ready equipment and devices, etc.)
 - Coordination and alignment with other associations or WGs work on the topics

2021 timeline proposal



 = deliverable

Note: Timelines to be further discussed and agreed with the sub-groups at the kickoff meeting

Knowledge sharing session: 'Mitigation measures for GQ&H2 handling'

— Rational for the session

Although a lot of research and projects have dealt (or are dealing) with mitigation measures for gas quality variations, a **better understanding of the available options** for different business cases (e.g., residential, commercial, industrial, grid management, etc) is expected to add value to current and upcoming work, especially within the framework discussion for the WI classification system proposal.

— Goal and scope

The exchange of knowledge about existing mitigations options and tools for gas quality variation and H2 handling at different levels of the gas value chain (e.g., grid and end-user level, mainly) should **facilitate/smoothen the discussion in the PMG**. The goal is to give to the participants a better knowledge of the variety of mitigation options, and to a certain extent their rough cost (if possible) and limitations.—This should ultimately lead to better understanding and discussions within the PM group.

— Program

Introduction to Gas Quality variation and H2 impacts + **several cases studies (5-10 minutes each) of mitigation solutions** that are used in practice (at grid and end-user levels)

✓ **Participants : PMG and sub-groups members**

✓ **Date : 24th of February (instead of the usual PMG meeting!)**

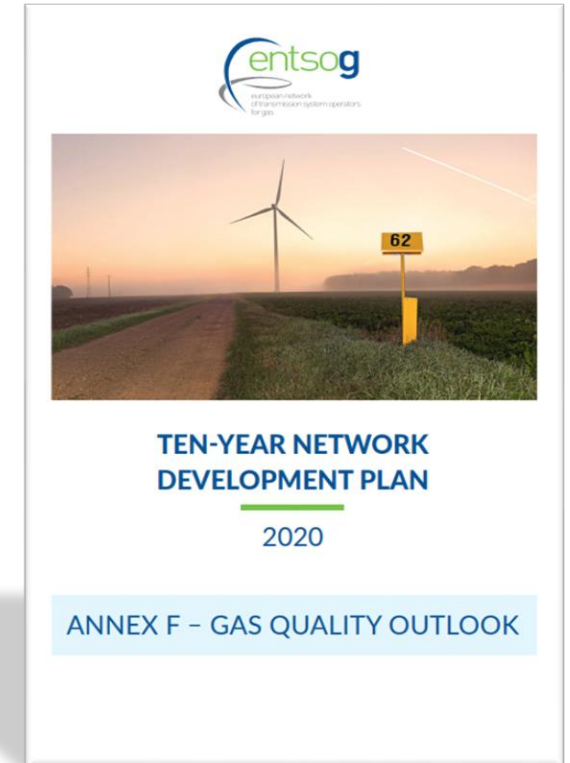
A.O.B. & next meetings

Gas Quality Outlook

- Article 18 of the network code on interoperability and data exchange requires ENTSOG to publish, alongside TYNDP, a **long-term gas quality monitoring outlook** (Gas Quality Outlook – GQO) for transmission systems in order to identify the potential trends of gas quality parameters and respective potential variability within the next 10 years.
- TYNDP 2020 is the third edition incorporating the Gas Quality Outlook [\[link\]](#)
- One of the main improvements in this edition is the inclusion of an extended section about the influence of hydrogen blends on GCV and WI



What could be improved?
How could it be more practical?



Overview of next steps – Wrap up

Sub-group 1)

- Weekly meetings have been scheduled
- First key deliverable expected by mid-March

Sub-groups 2) and 3)

- Kick-off meetings expected beginning February
 - Doodle to be sent to those that expressed interest in each sub-group (**you can still join!**)
- Before the kick-off meeting:
 - Draft plan of the goal, scope, deliverable and timeline
- During the kick-off meeting:
 - Agreement on way of working, goal, scope, deliverable and timeline
 - Identification of synergies between other associations work and potential liaison
 - Appoint chair/co-chair

Next meetings

- Next meeting **24th February** from 09:30 to 13:00 CET → *Knowledge sharing session on mitigation measures for GQ&H2 handling*
- Doodle for SG2/SG3 kick-off meeting(s) to be sent
- Proposal for next meeting:
 - 23rd March from 09:30 to 13:00 CET



You can download ALL meeting invitations from SharePoint [[here](#)]



Thank you for your attention