

**Qualitative performance requirements to inform PPR 5 discussions on black carbon measurement<sup>1</sup>:**

- Precise for potential certification/evaluation of control measures
- Accurate, useful for developing BC inventories<sup>2</sup>
- Reliable/robust for typical marine engines and fuels
- Low system complexity
- Ease of use/practical
- Practical for measuring at the source:
  - Test bed
  - On-board
- Relevant international standard for marine engines
  - Already exists
  - Can be established or adapted
- Appropriate dynamic range
- Commercially available/viable
- Vetted and used by BC research community and marine industry

[1] Not meant to be binding on future certification procedures or technologies.

[2] Caveat: TOA as a reference method is questionable.

ICCT to develop detailed definitions.