Draft Definition of Clean Ammonia (Interim Summary)

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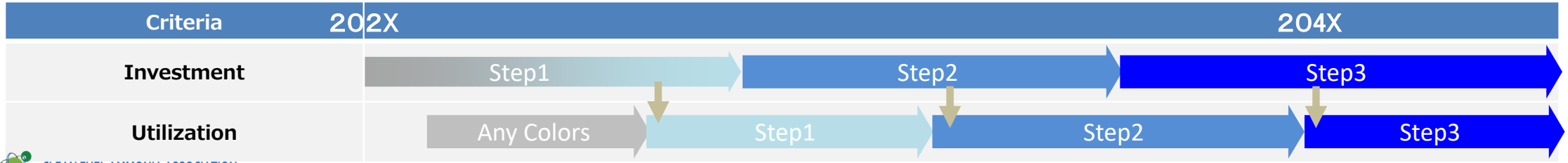
Starting with the utilization of existing plants, investment and utilization criteria will be transitioned step by step in accordance with the diffusion trend of the latest technologies.

Item	Draft	Reason（●）, Supplement/Remarks, etc.（・）
Calculation Boundary	**Step1 : Gate to Gate; Details are TBD** Step2 : Considering expansion to Well to Gate	●It is premature to include Well to Gate-in because the actual GHG emissions at wells are still under investigation and no threshold for fossil fuels has been established. ・The boundaries for CCS, etc. will be discussed in detail and reflected in the threshold. ・Expansion of the boundary will be considered in conjunction with the progress of the discussion on the treatment of CI at wells.
Scope	**Scope 1、2（Follow CI calculation guidelines）**	●For equal footing between plants with different energy procurement methods.
Threshold (Relative)	**Step1 : GHG emissions based on the natural gas SMR process, reduced by at least 60%** ※Double counting with CO2 reduction credits is not allowed. Step2 : Increasing the reduction rate (ex. 70% or higher) will be considered.	●Relative value should be included as an explanation of the rationale for the thresholds. ●Because of a possibility of utilizing existing SMRs, the threshold should be set assuming process CO2 capture in SMRs, and the expression should be applicable to O2-ATR as well. ・Ammonia production from by-product hydrogen will be discussed based on the definition of clean hydrogen.
Threshold (Absolute)	**STEP1（Tentative）: 0.84t-CO2e/t-NH3 or Lower** STEP2 : Revising to a more stringent threshold will be considered.	●The value will be modified using the average plant efficiency and the boundaries to be determined as described above.
CO2 Reduction Method	**CCS・EOR（※）** **※Only eligible if the storage of EOR project is "equivalent to CCS."** **Plantation and other offsets/CCUS are TBD.**	●EOR will be considered for approval only if a project satisfies the conditions of "equivalent to CCS" (conditions are TBD). ●The treatment of offsets will be considered in the future to ensure consistency with systems, regulations, international trends, etc.

Transition Image of Investment and Utilization Criteria for Fuel Ammonia



Conventional SMR(Steam Methane Reforming) Process

CO2 to be recovered from
(1) Gas Purification (CO2 Absorber) **as Initial Proposal**, and
(2) Primary Reformer (3) Boiler for Power Generation for **Future Considerations**