

Sustainable taxonomies and their role in channelling capital towards sustainable cooling

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#01 A paradigm shift: a new role for the financial sector

The financial gap per year to reach Net Zero globally is significant



\$4.5T

per year needed
for Net Zero by 2050

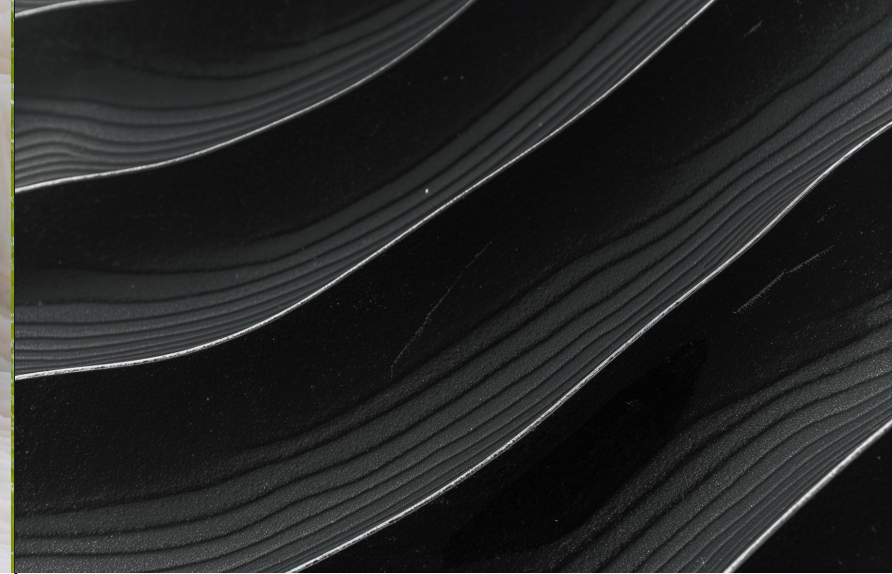
Source: IEA Net Zero by 2050



\$2.2T

invested
in clean energy in 2025

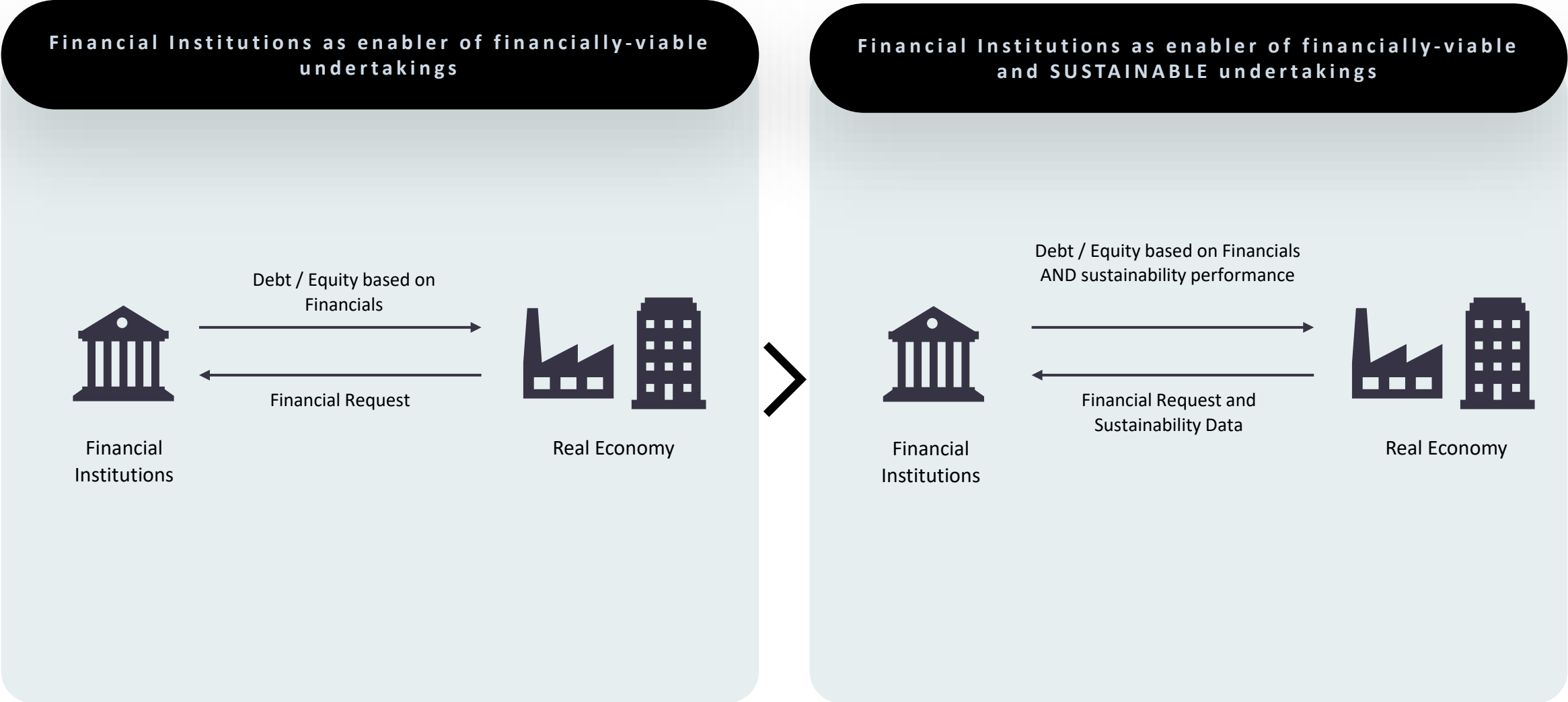
Source: IEA, World Energy Investment 2025



\$2.3T

annual gap that
finance must close

With Sustainable Finance the relationship of the financial sector with the real economy is changing



#02 Sustainability taxonomies and their potential for cooling

Taxonomies classify economic activities into “sustainable” and “not sustainable” thus helping the financial sector in analysing the sustainability of activities



The Problem

- For a long time “green” was not officially defined
 - Financial institutions cannot distinguish between green and greenwashing and lack the technical capabilities to assess the sustainability of undertakings
- How can the financial sector channel capital to the right solutions if they cannot identify the right solution?



The Solution

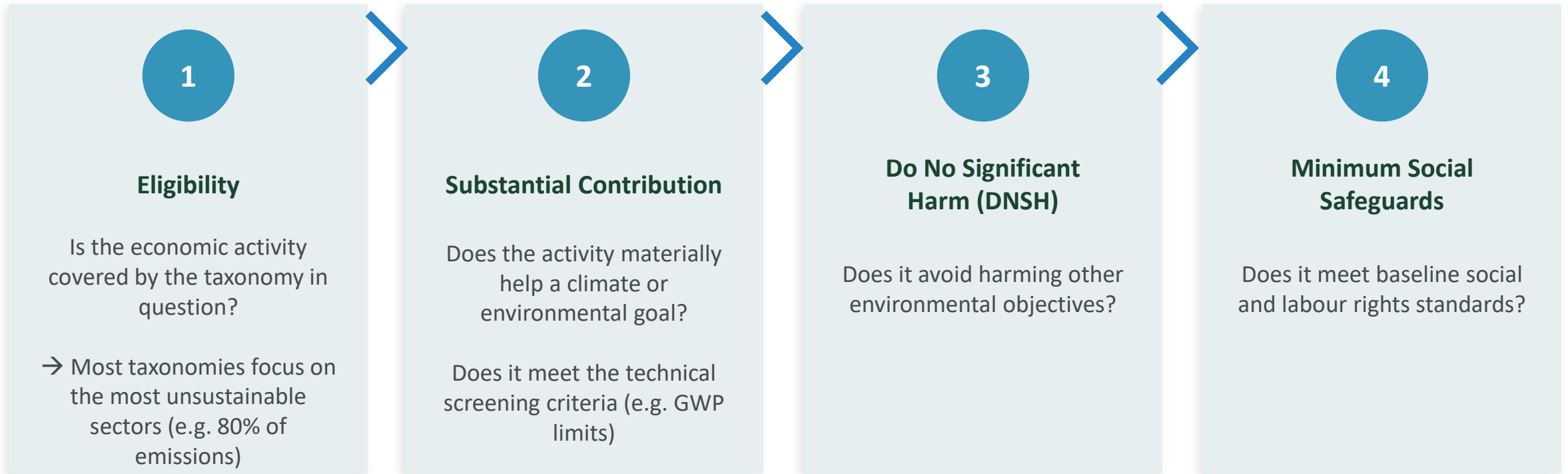
- Sustainable taxonomies define **thresholds** for sustainable solutions **sector-by-sector** → they are classification systems
- By providing a sustainability check against a taxonomy a company or project can provide a reliable **signal to the financial sector**
- Taxonomies provide **transparency** where reliable knowledge was missing
- Taxonomies reflect the **best available technology** (BAT) at any moment in time and have to be updated regularly in order to become more ambitious when technology evolves
- Important: taxonomies do generally **not prescribe** to invest/finance solely in taxonomy-compliant activities, non-sustainable activity can still be financed, but it cannot be labelled sustainable



Most taxonomies follow a set process to analyse whether an economic activity is sustainable or not



A taxonomy is a **classification system** that defines which economic activities count as "sustainable" — based on **verifiable, technical criteria**.



Being classified as sustainable under a taxonomy can reduce the cost of capital when R290-based cooling systems are financed

While R290 can be more expensive than conventional cooling agents, there can be a **reduction in cost of capital** resulting in the green label according to the local taxonomy.



Example: A building achieving taxonomy alignment (GWP < 675 for cooling agents) for a given taxonomy can now access ESG-labelled bond markets, qualify for green loans at preferential rates, and be included in sustainability-focused investment funds — reducing cost of capital.

Example: The HVAC / Refrigerant Criteria in Australian Sustainable Finance Taxonomy are one of the most detailed

C15 Manufacture of Energy Efficiency Equipment for Buildings and GWP thresholds for construction & buildings screening criteria

Activity overview		Technical screening criteria — Green	
Sector	Manufacturing and Industry	Green	The activity manufactures, repairs, maintains, imports or distributes: <ul style="list-style-type: none"> • Heat pumps and compressors and air conditioning systems not using HFC refrigerants or blends • Electric vehicle charging equipment • Induction cooktops • Rooftop solar and batteries • Appliances in the top 15% of GEMS energy label index that do not contain refrigerants with GWP greater than the published threshold (Table 14)
Activity	C15. Manufacture of Energy Efficiency Equipment for Buildings		
Associated ANZSIC codes	2499 Other Machinery and Equipment Manufacturing 2439 Other Electrical Equipment Manufacturing		
Objective	Climate change mitigation		

TABLE 14 | GWP thresholds — Construction and Buildings screening criteria

Type and capacity / Year	2027	2028	2029	2030	2031	2032	2033	2034	2035+
Small A/C [<10kW]	700	700	700	150	150	150	150	10	10
Medium A/C [<700kW]	700	700	500	500	150	150	150	10	10
Large A/C [≥700kW]	10	10	10	10	10	10	10	10	10
Commercial hot water heat pump	150	150	150	10	10	10	10	10	10
Supermarket refrigeration	10	10	10	10	10	10	10	10	10
Residential hot water service	10	10	10	10	10	10	10	10	10
Residential A/C	700	700	700	700	700	150	150	10	10

Medium A/C thresholds can be applied for large A/C [≥700kW] where regulations restrict refrigerants to A1 flammability only.



The key takeaways include that more technical GWP criteria for refrigerants could enter sustainable taxonomies around the world with your help



The money exists. The \$2.4T annual gap can be closed — **if capital is directed correctly.**



Sustainable taxonomies are **the pipes**. They define **where green capital flows**. Right now, not all include your industry.



A few but not all taxonomies have explicit refrigerant GWP criteria. That must change.



You hold the key data. Without technical input from this community, taxonomy criteria will be written by people who have never measured a GWP of a cooling agent.



Thank you for your attention! Looking forward to your questions.

Contact



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