Cost and resource analysis of LRM practices and available financing options

Bassam Elassaad, TEAP Task Force

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Cost of LRM

LRM costs vary depending on many factors, including:

The type of refrigerant,

The scale of the operation,

Regional regulations,

Technology employed, and

The fate of the recovered refrigerant (whether reused or destroyed)

Effective implementation of LRM requires an evaluation throughout their life cycle of:

Capital expenditure,

Operational expenditure,

- Handling, storage, and logistics,
- Training and educational cost
- Compliance cost,
- Destruction cost.

Opportunity cost: recover or move to the next job?

Additional considerations

Recovery and recycling is relatively simple; however, to be effective, a large number of recovery and recycling equipment is needed;

Equipment for reclamation, sophisticated separation/testing technologies, and destruction is capital intensive and centralized;

Equipment cost varies from a US$400 hand-held leak detector, to US$5,000 reclamation machine, to US$4.2 million commercial plasma arc facility for refrigerant destruction;

High refrigerant prices have driven more action on leak prevention, refrigerant recovery and reuse in many parties and markets.

However, high prices may increase the risk of illegal trade and stockpiling.

It might look like junk, but it costs a lot to manage!

Photo courtesy of Kylie Farrelley taken at a shopping mall in Nairobi, Kenya

Financing LRM - MLF

- The **Multilateral Fund** provides technical assistance for recovery & reclamation and demonstration pilot projects:
  - The MLF does not possess sufficient funding to support large-scale implementation of LRM activities.
  - Decision 91/66 providing a funding window for inventories and setting management plans, but not for the implementation of those plans.
  - Decision 93/104 requests the Executive Committee to consider at its 97th meeting the establishment of a funding window supporting the implementation of LRM plans in line with the request of the parties to the Montreal Protocol contained in decision XXXV/11.

Financing options

Extended producer responsibility (EPR) and product stewardship

Tax measures

Carbon credit financing

Carbon credit financing platforms for LRM

Corporate Buyers

Voluntary Carbon Market

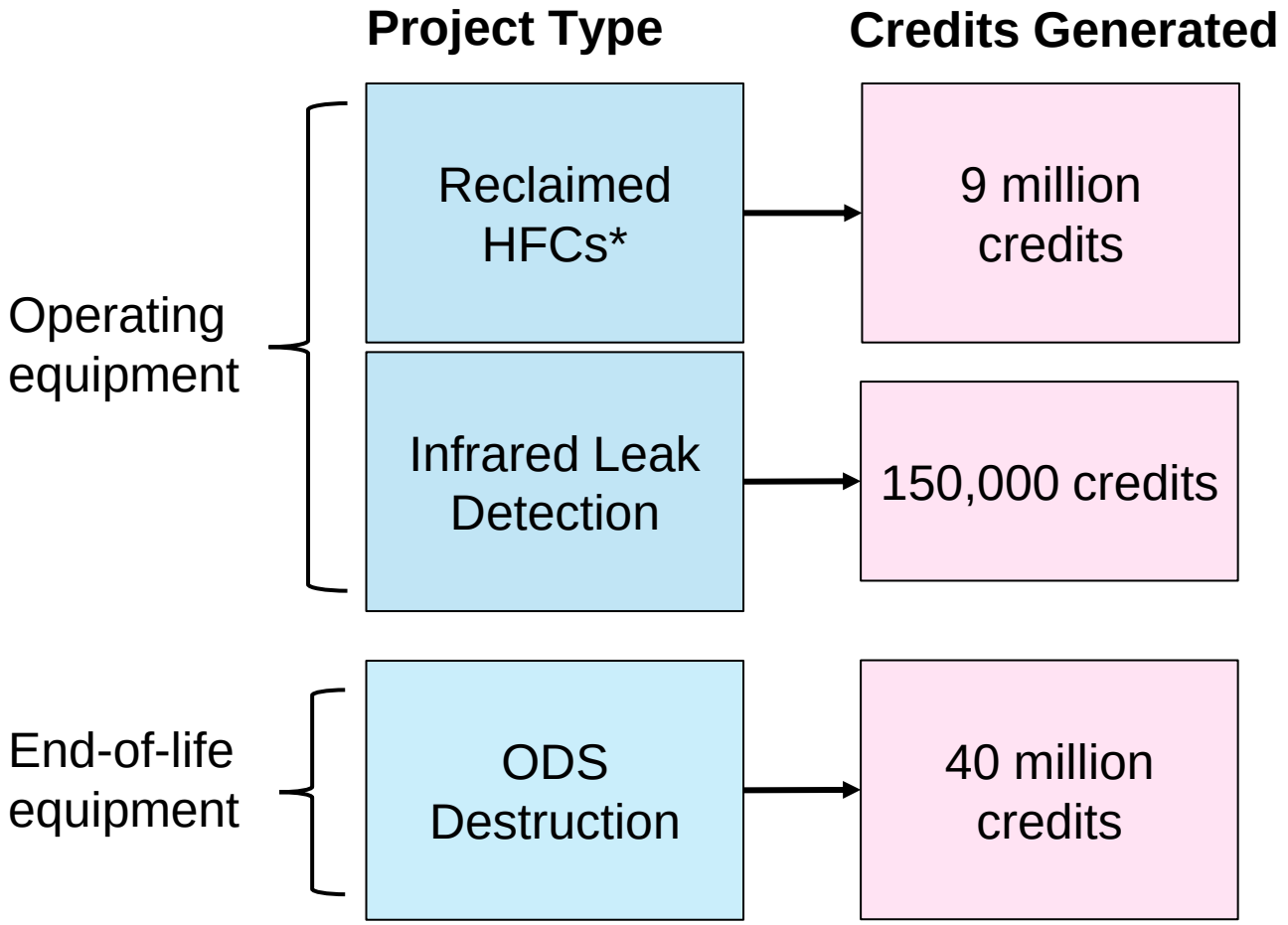
Compliance Market

Government Buyers

Paris Agreement Article 6 (formerly CDM)

Joint Crediting Mechanism (JCM)

The **Voluntary Carbon Market** has provided ongoing, large-scale finance for LRM projects



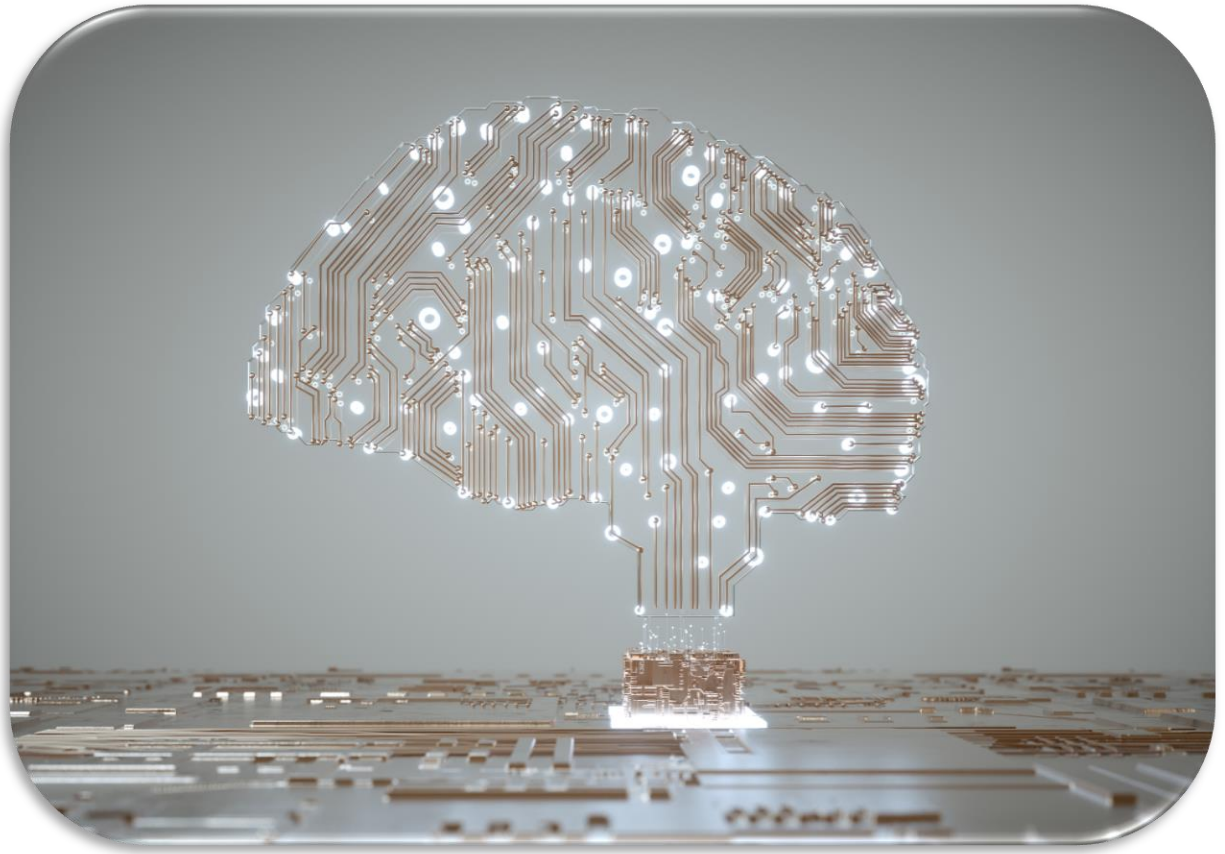
*Only in USA, Canada, and Mexico
Reference: CC Lab Fact Sheet on Fluorocarbon Methodologies, 2023

Expanding the options for finance to scale up LRM

Meeting the needs of financing LRM, and addressing the challenges associated with implementing LRM, particularly in A5 parties, requires:

- Expanding existing mechanisms and introducing new ones;
- Innovative financing mechanisms, including public-private partnerships and leveraging private capital;
- An integrated approach by parties.

Experience and scale reduce costs



Conclusion

If a phaseout / phase-down regime creates a shortage of refrigerant and leads to price increases, then refrigerant recovery may increase.

However, if the supply of newly produced refrigerant remains plentiful, other policy and economic measures may be required.

Establishing a data collection system by parties could inform their financial decision-making and help assess the cost effectiveness of LRM

Thank you

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