Q. **Reference: Application, Replace HVAC System (2023–2024) – Bishop's Falls**

a) Specifically, what types of HVAC systems will be considered for installation and what are their efficiency ratings and annual operating costs?

b) What is the basis for the $172,000 cost estimate?

A. **a)** The air conditioning ("AC") unit currently used in the existing heating, ventilation, and air conditioning ("HVAC") system at Bishop's Falls is an electric rooftop type. The new AC unit will be the same type. This type of AC unit has a heating efficiency of approximately 80%. The estimated annual electricity cost for the new unit is approximately $18,000.[1] Newfoundland and Labrador Hydro ("Hydro") spends approximately $3,000 annually for the service contractor to perform a leak test and preventative maintenance on the existing unit, not including the corrective maintenance in the event of an in-service failure. Hydro anticipates the same annual preventative maintenance cost for the new unit; however, the new unit is anticipated to be more reliable and it will use an environment-friendly refrigerant as the production and import of R-22 refrigerant, which is used in the existing unit and has been phased out in North America due to its environmental impact if released into the air.

b) The project cost estimate was based on the following:

- A consultant will complete the technical specifications, drawings, and calculations for the required unit capacity.
- An external contractor will complete the supply and installation of the rooftop AC unit. The installation of a curb adapter on the top of the existing roof curb to allow for the installation of the new unit (included in the contractor's scope of work).

[1] Estimated based on a rooftop AC unit (York 17.5T 54 KW) that was proposed by the service contractor at Bishop's Falls. It was assumed the unit would be running at full capacity for six months with 80% efficiency.
This resulted in 300,000 kWh × 0.06$/kWh (approx. marginal electricity cost) = $18,000 annually.

- Hydro's engineering and internal labour will provide support during the design, supply, and installation, as required.
- Costs were estimated based on a combination of vendor budgetary quotes and experience from previous projects.