

1 **Q. (Reference Application Volume 2, Company Building Renovations, report by CORE**  
 2 **Engineering) The CORE report is dated May 2020. It states (page 5) “The existing**  
 3 **systems as described are at or very close to the end of their useful lives and we would**  
 4 **recommend replacement in the next couple of years.” Why is NP proposing to replace**  
 5 **it in 2021 when CORE indicates it should be replaced in the “next couple of years”?**  
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7 A. The Carbonear office building HVAC system upgrade is justified on the obligation to  
 8 maintain safe and adequate facilities and cannot be deferred beyond 2021.  
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10 The Carbonear Regional Office is the Company’s main facility for the Avalon operating  
 11 area. The HVAC system serving the facility is over 30 years old.<sup>1</sup> Due to the age,  
 12 deteriorated condition and operational issues associated with poor environmental  
 13 controls, the HVAC system has reached the end of its service life.<sup>2</sup>  
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15 While the Core report notes that certain components of the existing system could be  
 16 repaired;<sup>3</sup> the report provides critical deficiencies with the existing HVAC system.  
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18 These include:<sup>4</sup>

- 19 • Current American Society of Heating, Refrigerating and Air Conditioning  
 20 Engineers fresh air standards are not being achieved;
- 21 • the cooling system uses R-22 refrigerant which is not environmentally friendly  
 22 and is due to be phased out of use in commercial air conditioning equipment by  
 23 2020; and,
- 24 • the humidifier is original to the building and is at the end if its useful life.  
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26 The system provides heating, cooling and fresh air ventilation for the Carbonear office  
 27 building. The risk of system failure, which will leave the building without these services,  
 28 is unacceptable. Accordingly, the Carbonear HVAC system upgrade is required in 2021  
 29 to maintain a safe and environmentally acceptable work space for employees and the  
 30 public who use the facility.

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1 The existing HVAC system was installed in 1989.

2 Core’s assessment concludes that the system is generally in poor condition and is at the end of its service life.

3 For example, Core’s assessment provides that “*duct insulation on the heat pump distribution mains is falling off. The insulation appears to be in fair shape and could be repaired and reattached to the duct work.*” See the *2021 Capital Budget Application, Volume 2, Report 5.1 Company Building Renovations, Appendix B: HVAC System Analysis – Carbonear*, page 5.

4 See the *2021 Capital Budget Application, Volume 2, Report 5.1 Company Building Renovations*, pages 10 to 11 which summarizes the main deficiencies of the HVAC system according to the Core report.