

1 **Reference: "2023 Capital Budget Application," Newfoundland Power Inc., June 29,**  
 2 **2022, Schedule B, p. 26, para. 2 (Distribution Feeder SLA-05**  
 3 **Refurbishment).**

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 5 **Q. The least-cost alternative to address the overloaded conditions**  
 6 **on distribution feeder SLA-05 is to complete a voltage**  
 7 **conversion on a section of feeder and transfer the load to**  
 8 **adjacent distribution feeder SLA-08, which operates at 12.5 kV.**

9  
 10 **a) What is the estimated cost to upgrade the single-phase taps to three-**  
 11 **phase without completing the voltage conversion?**

12 **b) Please provide a cost-benefit analysis demonstrating which alternative**  
 13 **is least cost.**

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 15 A. a) Upgrading the single-phase taps to three-phase without completing the voltage  
 16 conversion is not a viable option for the *Distribution Feeder SLA-05*  
 17 *Refurbishment* project.

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 19 When the original lines for the single-phase taps were constructed in the 1960s,  
 20 registerable easements were not obtained. Over the course of approximately 50  
 21 years, residential lots in the area have become fully developed with mature  
 22 trees, gardens, and garages in the rear. Upgrading to three-phase taps using  
 23 the existing prescriptive easements would result in encroachments on customer  
 24 property. Moving the distribution line to a different location to accommodate an  
 25 upgrade to three-phase is also not a viable option as reconfiguring the service  
 26 connections to each residential lot is cost prohibitive.

27  
 28 Newfoundland Power has a right to maintain the existing single-phase lines in  
 29 their prescriptive easements in order to provide service to the customers in the  
 30 area. However, in the absence of easements of sufficient size, the infrastructure  
 31 cannot be upgraded to three-phase.

32  
 33 b) Newfoundland Power completes cost benefit analyses to directly compare the  
 34 costs of the viable alternatives. Upgrading the single-phase taps to three-phase  
 35 is not a viable option and, therefore, a cost benefit analysis was not required.