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To the July 20, 2018 Webinar

Additional submitted attachment is included below.

From: Heydorn,Edward C. <HEYDOREC@airproducts.com>
Sent: Monday, July 30, 2018 12:08 PM
To: Energy - Docket Optical System
Subject: 18-HYD-02: Hydrogen Station Capacity Model (HySCapE 1.0)

Thank you for the opportunity to provide the following comments to the 20 July 2018 webinar:

- Remove the dispenser flow rate input from the spreadsheet. The dispenser flow rate is a function of tank size, the ambient temperature, and the J2601 tables, not station design. Stations that use the MC Method may be able to fill a bit faster, but not significantly. This input leaves too much room for influencing the results in a way that may not be equitable.
- Fix the time between filling events. Using the parameters such as those in CSA HGV 4.9 could be an appropriate reference.
- Similarly, remove the Hourly Distribution option. For the program to be fair, all users should be running the same usage case.
- Allow for compressor flow rates over 100 kg/hr. We can expect larger compressors to be common in the future.
- Have the input for compressor flow rate be flow rate at pressure since most compressor flow rates are a strong function of suction pressure. It would also be good to have a maximum suction pressure.
- The program currently allows for three pressure storage levels, currently described as low, medium and high. It would be better if the program could support 4 or better yet N pressure levels.
- It isn't exactly clear with the current inputs which banks can accept delivery, provide gas for the compressors, and can dispense. It would be good if each bank can supply gas to the compressor, supply gas to the dispenser, and accept gas from delivery.
- Simplify the output to a single number. The purpose of this program is to determine the station capacity. Providing multiple answers and graphs distracts from the purpose of the program. The program is not intended to be a good station simulation, so the rest of the graphs are not expected to be correct.

Please contact me with any questions. Thank you again –

Ed Heydorn

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