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Docket Number:	19-BSTD-03
Project Title:	2022 Energy Code Pre-Rulemaking
TN #:	235637
Document Title:	Vertiv Comments - Vertiv Response to TN235126 - Addressing Concerns with Integrated Pumped Refrigerant Proposal
Description:	N/A
Filer:	System
Organization:	Vertiv
Submitter Role:	Public
Submission Date:	11/17/2020 11:50:40 AM
Docketed Date:	11/17/2020

*Comment Received From: Vertiv
Submitted On: 11/17/2020
Docket Number: 19-BSTD-03*

Vertiv Response to TN235126 - Addressing Concerns with Integrated Pumped Refrigerant Proposal

1) “Vertiv/Emerson Liebert DSE Free-Cooling Economization split-system with integrated pumped refrigerant economizer appears to be a proprietary product.”

The use of the term “Integrated” within our proposal is to remain consistent with the Energy Code definition of economizers. We have no desire to allow refrigerant economizers into the Energy Code that are an after-market add on to an installed system that are not truly integrated into the controls and operation of the installed system. The Energy Code should remain technology neutral and not favor one manufacturer over any other.

Other manufacturers do exist that market a pumped refrigerant economizer including a company named BASX Solutions. Reference to their product can be found here: <https://www.basxsolutions.com/cooling-economizers/>. The idea of a pumped refrigerant economizer is not proprietary as claimed.

2) “With an elevated return air temperature design of 95°F at 80% critical IT load the integrated pumped refrigerant full economizer threshold is no higher than 55°F dry-bulb, see <https://www.vertiv.com/en-us/support/tools-applications/free-cooling-economizer-calculator/>”

The Vertiv online tool “Free Cooling Economizer Calculator” is intended as a guide for initial consideration of the Liebert DSE product. This tool includes a disclaimer that reads, “These calculations are estimated and should not be construed as results you would achieve in an actual installation.” It is not to be used for detailed, application-specific analysis and is not a true depiction of the performance the Liebert pumped refrigerant economizer within all of California’s 16 Climate Zones.